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A technical and educational publication, espousing progress and art in motion picture photography.

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FOREIGN REPRESENTATIVES

Georges Benoit, c-o Louis Verande, 12 rue d'Aguessau Paris, 8e
John Dored, Paramount News, Paramount Building, 1 Rue Meyerbeer, Paris IXe, France.
Herford Tynes Cowling, Eastman Kodak Co., Rochester, New York, Eastern Representative.

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The Value of Photographic Training To a Motion Picture Director

Does Experience Behind the Camera Give a Quality That Makes a Man Better Fitted to Direct Pictures?

By HAL HALL

DESPITE the fact that a motion picture director meets with probably more grief than any other man connected with the motion picture business his position seems to be the one which most men aim to reach in the profession of the cinema To become a director is the secret ambition I venture to say of probably seventy-five per cent of the men who are in the game

Just why men want to become motion picture directors is a question that is difficult to answer Mayhap it is because of the human desire to have power perhaps a craving on the part of mankind to create At any rate most men in pictures have the wish to become a director Few reach that goal Few make good when they have the chance Sometimes studio politics are responsible for their failure But most of the time it is really lack of ability and fitness for the job Only a few men are fitted to be good directors Just as only a few men are fitted to be great writers or plumbers or band masters.

None has as yet satisfactorily explained the process by which studio officials select a man who is to be elevated to the position of a director There seems to be no hard and fast set of rules And judging from some pictures one sees, there has been but little thought applied in the choosing of a man for the job Some people say you have to be a relative of someone else but that is a bit rough This writer knows a number of good directors who are related to none in the picture business

It does seem however that studio executives might do well to give a little more serious consideration to the men who photograph their pictures when they are thinking of breaking in new men as directors In the past few years many new faces have appeared in directorial capacity recruited from the ranks of the writers Some have made good, many have been dismal failures as directors and have gone back to writing, at which they are successful

In the humble opinion of this writer a cinematographer if he has education and proper background is excellent directorial material There is not a directorial trick of the trade with which he is not familiar As a matter of fact many a director has his cameraman to thank for saving a picture or adding something that has made it outstanding A good director will listen to his cameraman ask his advice take his suggestions, and then he will give the cameraman due credit for what he has done

Most of the high grade cinematographers in Hollywood have worked with perhaps a score of different directors They have had the opportunity to study the methods of each They have from year to year been gaining information that a new director would give a year's salary to know when he starts on his first assignment At the moment this writer could name nearly a score of cinematographers in Hollywood who are ripe for directorial positions But I venture to say that a very very few will reach that position Just why is a question I cannot answer

The average cameraman is a highly intelligent gentleman with excellent education and many years of experience These men have learned from the mistakes of many directors what to avoid This experience, coupled with their knowledge of photography, should make of them excellent material for a directorial kind

In past years a few cameramen have been made directors, and if my memory serves me right they have all succeeded Irvin Willat Phil Rosen Bert Glennon Roy Pomeroy and Victor Fleming these are just a few of them and none have flopped as directors

All of these men will tell you that their experience behind the camera has been an invaluable help to them in the making of their pictures They have a certain pictorial sense that the ordinary man cannot be expected to have They cannot be fooled if they happen to have a cameraman who is not doing just the right thing They are not at the mercy of the men behind the cameras on their sets, and they can save thousands of dollars for their studios by knowing the many camera tricks of the trade which are short cuts to successful picture making

"A series of motion pictures" says Director Pomeroy in speaking of the value of photographic training to a director, "projected on a screen is the ultimate result of all the talent, time and effort expended in the production of a motion picture If the photograph does not adequately convey the exact intention of the director the production may lose the entire charm and sense of spontaneity by reason of inadequate portrayal of character and scene

"It is absurd to imagine that an audience can superimpose on an incorrectly photographed scene the emotions and ideas visualized by the director A director is entirely dependent upon his cameraman This dependence can be carried to too great a degree if the director is unfamiliar with the simple rules of photography.

"Direction of a photoplay is analogous to the painting of a picture The first thing taught the artist is the use of the tools and media of his craft In order for the artist to convey his visions and dreams to canvas he must first know the limitations and possibilities of his medium A director who understands the immense dramatic possibilities of lighting a composition would undoubtedly have a greater opportunity for expression than one who is limited by the degree of expertness of his cameraman

"I do not feel that it is necessary for a director to have such a fund of cinematographic knowledge as to be able to photograph his own picture but I do feel that with an adequate cinematographic training he would be in a better position to explain to his cameraman what he wanted and be better fitted to handle the directorial reins If he knows his cinematography should make them excellent material of a directinfinitely better suited for the position than a man who is totally ignorant of cinematography That stands to reason Mood, psychology feeling all can be expressed photographically, and a director who knows how to do it is certainly better than one who has to pray that his cameraman gets his idea"

Pomeroy was a cinematographer before he became a director And he is a cinematographer who did not fail when given his chance

The matter of dollars and cents also plays an important part in the making of pictures—a very important part Most cinematographers can cut expense where directorial recruits from other sources would never dream of it Only the other day this writer had occasion to be in a studio and saw a cameraman cut down the cost of production by a suggestion that had not been thought of by the director, who is a skilled man of many years experience And that cinematographer is a college graduate who has as keen a knowledge of dramatic values as any director in the business together with the prac-

(Continued on Page 36)

PROGRESS AND LIGHTING EQUIPMENT

A Practical Cameraman Speaks His Mind About Lighting Equipment

By VICTOR MILNER, A. S. C.

Victor Milner, A. S. C.

THE ENTIRE history of the motion picture, from its humble beginnings to its present awe-inspiring magnitude has been a continued chronicle of progress, of technical and artistic improvement. From the time when Edison handed his assistants the first sample of George Eastman's Celluloid film and exclaimed "We've got it, now work like Hell!" to the directorial cries of "Camera! Action!" echoing on scores of great studio sets this very morning, the film industry's unvarying watchword has been Forward!"

Those of us who have watched the developments of the past two years who have seen the industry change from silent to talking picture production without faltering in its stride, know that this progressive spirit is so deeply ingrained in the minds and lives of the personnel of production that it is a connate part of the industry's every ramification We have had definite, concrete proof of that progressive spirit in our daily work, mayhap even been able to aid in the progress ourselves We know that by our efforts and by those of our co workers, the industry has moved forward again.

Those of us whose good fortune it has been to have been a part of the industry for a longer period of time have even greater proof of this, for we have seen it grow from a mere miscegenate novelty to the greatest art-industry of all time We have seen the art grow from that of the nickelodeon 'chase' films to that of *The Patriot* and *The Love Parade*, we have seen the theatres grow from the penny-arcades of the back-alleys to the *Roxys* and *Paramounts* of the world's Broadways, we have seen the studios grow from converted cowbarns to vast cities, we have seen the business grow from a disreputable "game" to a giant industry. We have seen and participated in the most inspiring social and economic phenomenon of the century

Furthermore those of us who have during this period been behind the industry's cameras have seen equal advances in almost every particular of our craft We have seen production methods change from a happy-go-lucky hit-and-miss proposition to an exact science We have seen cinematography change from a mechanical task to a highly developed and recognized art We have seen amazing improvements in our methods, and in the tools with which we work We have seen cameras change from the primitive Edison and Pathe 'boxes' to the superb instruments now used in making sound pictures We have watched cinematographic lenses grow from rather nondescript objectives of small aperture to perfect optical creations working at such incredible openings as F 1.5 and even F 0.99 We have seen the sensitive film evolve from the slow and grainy emulsions of yesteryear—emulsions which were not even as color-sensitive or gradationally balanced as today's positive stock—to the wonderful panchromatic materials now available We have seen laboratory procedure stabilize itself from the old, slipshod method of dropping a rack of film into the handiest tank of 'soup" and leaving it there until the assistant thought it might be developed, to the almost infallible process of modern machine development, but what about the greatest essential of all interior cinematography—lighting?

To the casual eye it would seem that the lighting too has undergone its share of improvement At any rate even the rankest layman cannot fail to observe the vastly better visual quality of modern studio cinematography as contrasted with that of the past But can all of this improvement be credited to better lights and lighting?

I do not believe so

In the first place, a great deal of the improvement is unquestionably due to the tremendous improvements made in the sensitive materials No one can deny that one of the greatest increases in the actual photographic beauty came with the introduction of the panchromatic emulsion. The actual styles of photography and lighting were unchanged, but the more sensitive emulsion was able to make fuller use of the light reflected from the subjects and gave unquestionably better results.

Then, secondly comes the fact that we now have artists of recognized ability directing the design and arrangement of the sets. In the old days, it will be remembered that the sets consisted chiefly of painted canvas frames, and were usually designed by the chief carpenter or some other equally important functionary. Now undoubtedly then as now many an artistic heart beat beneath a pair of overalls, but artistic yearnings are rarely a satisfactory substitute for thorough training in the principles of art and architecture. It is notable that with the advent of really competent architects as art-directors, the quality of production cinematography also improved That there was any artistic merit in the photography before this step was taken, and after, until the art-directors learned to work in intelligent cooperation with the cinematographers, is a genuine miracle and reflects the greatest credit upon the artistic endowments and perseverance of the men behind the cameras

Lastly, but of the greatest importance is the fact that the cinematographers have of late learned to use what lighting equipment there was at hand to the best possible advantage This writer's earliest adventure into dramatic cinematography was in 1912 at the old Fort Lee Studios in New Jersey Those were still the days of the painted canvas set The cameraman had hardly anything to do with the design of his sets and nothing to do with the matter of lighting them for the artificial lighting was literally a fixed proposition. The lighting arrangements usually consisted of a series of *Aristo* lamps which resembled the arcs used in lighting small-town streets. They were protected by cylinder-shaped glass bells and were suspended from above the set in fixed units—usually in rows of six The sets were built to conform with the lights —directly underneath the immovable lighting units as overhead trolleys were then quite unknown The floor lights were banks of *Cooper Hewitt* mercury-vapor tubes, and a few big *Wohl* twin arcs—big as a large piano and weighing a ton apiece It was known that a certain amount of light was required on a set in order to insure an adequate exposure accordingly that amount of light was thrown onto the set with little or no thought of how it fell. After all, the chief objective was to get a moving picture onto the screen, lighting and composition didn't count—even if anybody had thought about them then

By 1916 or 1917 however, studio lighting was beginning to receive serious consideration Here and there a cinematographer was teaching himself to use his lights for mood and effect, and by that time he had better lights to work with. There were the big sun-arcs the twin arc broadsides the various sized spotlights and the perennial *Cooper Hewitt* vapor tubes all exactly identical with the equipment now in

use True, there was no sign of the incandescent lights now in such general use but reduced to their essentials the inkies do not represent any new development in illuminating equipment design. They are an outgrowth of the development of panchromatic materials and—more than anything else—of the sudden coming of sound films Examined closely even the latest incandescent equipment is nothing more nor less than the time-honored arc mountings altered to permit the use of an incandescent-filament globe in place of a carbon arc Furthermore now that the electrical engineers have found ways to eliminate the humming note of the arc, these too are quickly reappearing on the sound stages of most studios Thus, save for the admittedly important addition of the frequently desirable "soft' light of the Mazda to the cameraman's lucif erous equipment, there has been no change in studio lighting apparatus since before the war

This claim may seem to be contradicted by the vastly improved quality of the photography of modern films But when we examine the situation carefully we must inevitably come to realize that it is true the improvement has been in the use of the existing apparatus rather than in the apparatus itself exactly the opposite to the course of events in every other line And no one can truthfully say that the lighting equipment of fifteen years ago had reached perfection

In the mean-rime sets have grown constantly larger and with this, and the ever increasing use of color photography the need for additional intensity of light has increased by leaps and bounds Yet since we have had only the more or less antiquated apparatus of past years the only way to meet this demand has been to increase the number of units on the ser

This multiplication has gone on to such an extent that today most sets are literally surrounded with a forest of iron lampstands and the scaffolding at the set-tops is hard-pressed to accommodate the myriad spots and projectors required to take care of the back and overhead lighting that now forms so an important a part of artistic ser illumination

One need only visit a modern set to verify this It does not take an expert technician to appreciate the far-reaching results of such a condition Anyone can appreciate its psychological effect on the actors directors and such people and the physical inconvenience it causes the carpenters property-men and such artisans in the performance of their duties Technicians can appreciate the trouble and loss of efficiency it inflicts upon the cinematographers electricians and sound men One does not need to be a recording engineer to realize the added burden that the maze of iron pipestems and large metallic reflecting surfaces must put upon the microphone-placers and mixers One need only think a little to imagine the added work it gives the electricians responsible for handling such a great number of bulky units and their inseparable maze of cables And as for the added complication of the First Cinematographer s task, words utterly fail!

In the old days with but one or two cameras, and a scant half-dozen or so lighting units, the task was easy Moving or 'killing' one or two units made a definitely apparent change in the lighting, it made fine distinctions in lighting and modelling effects possible But, today, with the number of units multiplied twenty-fold the task of the successful Director of Cinematography is a colossal thing And when you add to it the problem of arranging this maze of lighting so that it is suitable for anywhere from five to fifteen cameras all shooting the same scene from different angles at the same time the business of artistically lighting a set is comparable to attempting to make a water-color painting with a house-painter s biggest brush and at the same time retain the delicate shading of the aquarelle Perhaps it can be done but experience has proven that the artist s tiny brush is more effective Similarly, with such a maze of individual lighting units (quite apart from the multiple camera problem) the cinematographer soon finds his delicate lighting effects lost in a maze of silks and "frosts' and jellos' and 'gobos , against which his artistic skill must strive blindly to produce the delicate effects he wants

When you add to this the fact that in modern production a cinematographer is constantly faced with an overhead mounting up at the rate of many hundred dollars a minute, you can begin to appreciate the serious hindrance that this multiplicity of lighting units is to the conscientious cinematographer While this is no place to comment upon the hectic struggle for speedy production now so general here in Hollywood it cannot be overlooked that, since it exists this complication of lighting troubles must be costing the producers a handsome sum From my own experience I can definitely state that, of the delays in production chargeable to the camera departments this unnecessary complication of lighting units is responsible for not less than 50% Any cinematographer supervisor or assistant director can tell you the dollars-and cents answer to that!

Now I do not say this in unthinking destructive criticism, on the contrary it is offered for the betterment of all concerned For the need exists and will continue to exist until

(Continued on Page 20)

An excellent illustration showing the maze of lighting equipment needed to light two people and a small set

No, this is not a photograph of actual German troops, but is a scene from Universal's "All Quiet on the Western Front," photographed by Arthur Edeson, A. S. C.

The World War brought to the screen by Universal in its picture "All Quiet on the Western Front," photographed by Arthur Edeson, A. S. C.

ALL QUIET ON THE WESTERN FRONT

The Greatest Human Document of the War Comes to the Screen

By LORETTA K. DEAN

THE THUNDER of the guns swells to a single heavy roar and then breaks up again into separate explosions The dry bursts of the machine guns rattle Above the air teems with the invisible movement with howls pipings hisses on every yard a dead man

Bombardment', says Kat

So Erich Remarque wrote in his magnificent book

And down near Balboa where Universal photographed the battle scenes for this great story 'All Quiet On the Western Front

The thunder of guns shook the earth lines of soldiers picked their way across shell pocked ground amid bursting grenades and bursting shells a bayonet flashed a ring of steel a scream then onward slowly almost painstakingly A little group of mud-covered men crawled over a knoll ten seconds later a terrific explosion and the knoll was a yawning hole

A few feet away and another blinding explosion men dropped to the ground burrowed their faces in the dirt like rabbits

'My God that fellow is lying right on the biggest charge of dynamite', the speaker sitting at what looked like a huge keyboard pulled his finger back with a jerk as he was about to push a button which would have blown the unsuspecting soldier to Eternity Practiced eye gazed across the battlefield another button was pushed another blinding explosion and another yawning hole only a few yards from a group of soldiers who were buried with the earth spewed up by the exploding dynamite

Twenty acres of land turned into a perfect replica of the battlefield at the height of the war A thousand men struggling as they struggled then Barbed wire rusted and tangled bits of torn uniform caught here and there—men had died there that is evident Mud puddles of dirty water Dead and dying men sprawled about in grotesque positions Some men sombre others laughing in the face of death

Realistic so much so as to make you turn away at times thinking perhaps the genius at the dynamite keyboard had made an error

And scattered about in spots that gave the best results were the cameras and cameramen Shells flew close overhead screaming by like messengers from Hell But the cameramen didn't seem to notice them Didn't seem to notice the clouds of dirt that sometimes showered down about them These cameramen are really remarkable chaps They talk little get little credit but what genius is theirs' What would such scenes as those mentioned above amount to without their cleverness' Just a lot of noise and wasted effort

While the cannons roared and shells flew and dynamite exploded a quiet-mannered man stood near Director Lewis Milestone He seemed at the moment unconcerned But a short time before when the preparations were being made for the great scene that was being filmed this man was a bundle of action He was here there everywhere and it was his judgment which decided that a camera would be here another there another in this place another in that This man was Arthur Edeson A S C director of Cinematography on the picture. a master cameraman of long experience

Making the battle scenes of this picture was really a remarkable piece of work War pictures have been done so well that whenever a producer decides to make one he is immediately faced with something mighty big to shoot at Each picture simply must be better than the one before—otherwise it is a failure

So Universal had a big job ahead when they decided to start this great war story Weeks were spent in preparing the ground for the battlefield And when it was finished it looked as though someone had transplanted a section of that Western Front to California Experts men who had been over there planned it German guns were brought across the Atlantic and then across the Continent just for the picture Trenches were dug and the twenty acres were mined and planted with dynamite This alone was a stupendous task Fine wires led from every charge to the big switchboard back of the lines Every charge meant certain death to perhaps a score of men if the man at the switchboard made a mistake

So days were spent in rehearsing The men were sent forward in waves They were told exactly where to stop at certain counts and who was to die and where and when they were to fall

You drop dead here explained an assistant director You drop over there and you here crouch down here and the blast will .'

And then the battle was begun Back at the switchboard the operator sat quiet and unruffled Suddenly he would reach out and press a button There would be an explosion and earth would fly behind a group of men A mistake of two

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One of the Battle Scenes in "All Quiet on the Western Front"

SHOULD SOUND BE "EASY TO LISTEN TO"

Sound Advice on Sound to Theatre Owners

By S. K. WOLF

Theatre Acoustics Engineer Electrical Research Products Inc

THERE is a great deal more to this matter of sound than simply making a program understood Public psychology demands that it be easy to listen to We can discuss this subject in terms readily understood by everyone, namely percentages A theatre can be rated in the percentage of intelligibility of speech which is the index of how easy to listen to' the patrons find sound in that theatre

Telephone engineers have found that a good measure of the efficiency of a transmission system is in the percentage of disconnected meaningless syllables that can be understood through it This is called an articulation test

An articulation test of normal speech direct from speaker to listener under perfect conditions gives 96% If there is any doubt in your mind that speech cannot be transmitted 100% under ideal conditions try this simple test Ask your listener to close his eyes so that he may not read your lips

Then you say the following words once each—map, nat mack nap, mat and nack and ask him to write them down as you say them Providing you do not unduly emphasize the final consonant of these words you will find that one or more of them have not been understood This gives you an idea of the difficulties encountered in speech transmission

The loudness with which sound equipment is operated is an appreciable factor in the intelligibility of the resulting sound There is a fairly broad range of volume about equivalent to the volume used in average conversation for which there is no depreciation in intelligibility However, as tests have shown if the loudness is somewhat greater or somewhat less than the conversational loudness we can expect a reduction of articulation of one to five per cent

Another factor influencing the intelligibility of speech is the amount of extraneous noise present Audience noise is of two kinds The first includes whispering coughing, laughing rattling of programs etc, and is not controllable by the Exhibitor The other scuffling of feet on concrete floors is controllable and eliminated with the use of carpet Further noise is often introduced into a theatre by and through the heating and ventilating systems and street noises sometimes enter through this channel This, too, is controllable Tests have shown that if the aggregate noise is 20% as loud as the sound, the articulation will be reduced 10%.

Excessive reverberation is still another factor tending toward decreasing the articulation in the theatre If, in any given theatre the reverberation exceeds by two seconds a certain optimum value a reduction of 10% in the articulation results It can be readily seen that this condition is often encountered in houses not properly treated acoustically when the audience present is small

There are two more factors to be considered before we can round out our estimate of the probable articulation of the theatre and these are the percentage reduction necessary on account of the recording and on account of the reproducing system Since the articulation rating for speech under the best conditions from the original sound source is only 96%, let us assume that the best possible recording and reproducing would be 95% each, or a reduction factor of 5% each

To sum up these reduction factors and to get an idea of how a theatre would rate under the conditions that I have outlined above, we get the following

Percentage articulation of original speech under perfect conditions	96
*Percentage reduction due to incorrect loudness	5
*Percentage reduction due to extraneous noise in theatre	10
*Percentage reduction due to reverberation	10
Percentage reduction due to recording	5
Percentage reduction due to reproducing	5

* Controllable by exhibitor

Applying the above listed reductions to the original 96% in the regular commercial method of applying discounts, we find the resultant percentage articulation to be 67%

Extensive tests by Dr Fletcher of the Bell Laboratories have enabled him to draw a curve showing the relation between the percentage articulation of meaningless syllables and the resultant conversational efficiency in which the listener has the aid of context of the sentences in which the syllables are found From this curve we find that in a theatre having an articulation rating of 67%, the conversational efficiency would be 90% This means that the patrons would miss about 10% of what was going on, which would keep them under a continuous strain to try to make it out This strain is perhaps not conscious but does interfere with the ease and comfort of the audience.

Loudness of operation extraneous noise, and reverberation in the theatre are controllable by the exhibitor in ways described above

In addition to these measurable factors there is another that has an appreciable place in show psychology illusion The sound must appear to come from the picture and yet the listener must be allowed to feel that he is in the same room with the speaker With present day recording the areas around and immediately in back of the horns should be sound reflecting which allows the room tone" of the recording to become associated with the "room tone in front of the theatre so that the listener unconsciously feels that he is in the same room with the speaker

With so many factors bearing upon the net result each presenting its reduction factor, however small it behooves the exhibitor who wishes to preserve and increase his success to see that all reduction factors within his control are kept to the absolute minimum

The best possible equipment obtainable properly operated in a theatre that is acoustically correct and free from extraneous noise is the only possible answer to 'easy listening" and increasing receipts

---

Believes 65 M. M. Film Will Be Adopted

CONVINCED that 65 m m film is certain of adoption for wide screen pictures Colorcraft is ordering equipment for its new laboratory to conform to this size according to William Hoyt Peck vice-president of the company. This equipment will be installed in a new laboratory to be constructed at 3614 35th Street Long Island City

It is expected that the laboratory will be completed about April 1 but camera equipment and improved machinery will be ready for installation about March 15, states Peck who on Saturday said

"We will be prepared to meet the demands and requirements of the industry on a third dimensional basis no doubt this year I am not at liberty to disclose the plans we have in mind for stereoscopic improvements which we are taking step by step in our present procedure The engineering brains of the industry are to be complimented on the rapid advancement of intricate work It is my belief that a wide film in color with a lifelike naturalness' and sound will be the ultimate of the picture beautiful by the end of 1930 Stereoscopacy will be attained a bit later There will be an appreciable increase in rentals for the producer and distributor on films which are produced in sound where their stars appear with a lifelike naturalness' together with a uniformity of prints carrying tints hues and shades and true color accutacies, and as we are prepared to do this on a commercial basis we have but one further goal to attain and that is the stereoscopic picture"

Watch for the Cinematographic Annual

SILENCING DEVICES ANALYZED

Committee Working Toward Standard Camera Silencing Device Gives First Report

A DETAILED analysis of the efficiency of sixteen different camera silencing devices used in the recording of talking pictures is embodied in a report just announced by Irving Thalberg chairman of the Producers-Technicians Joint Committee of the Academy of Motion Picture Arts and Sciences

The analysis is the result of tests conducted to ascertain features to be incorporated in a standard and simplified camera silencing device Further investigation is now being arranged.

The research is under the direction of a sub committee composed of H G Knox, vice-president Electrical Research Products, Inc., and F M Sammis general Pacific Coast representative for RCA Photophone Inc

Sound booths large enough to hold both camera and cinematographer were not included in the tests which were limited to "blimps" bungalows" and camera blankets The research, it is stated is not aimed at an attempt for camera re-design but is concerned only with making possible the creation of a silencing device of maximum efficiency

Among preliminary recommendations are:

Motors should be mounted as an integral part of the camera so that any external silencing device will be effective for both

Devices for coupling the motors to the cameras, including cables and gears should be improved to provide more quiet operation

The type of tripod used does not seem to have much effect on the noise On the basis of these preliminary results the use of a heavy steel tripod seems unnecessary in so far as sound insulation is concerned Covering the tripod with blankets seems to help in reducing any tendency to vibrate

Photographing through glass reduces the noise transmitted through the silencing device

The amount of noise transmitted through the silencing device appeared to be nearly independent of the direction of the pickup device from the camera

Rough quantitative observations indicate that the various blimps and bungalows absorb more high than low frequencies.

The camera mechanism should be properly serviced and maintained so that it will remain quiet some cameras tested were noisier than others of the same make

Sound proof rooms in the Hollywood laboratory of Electrical Research Products, Inc were used for the tests Figure No 1 shows the arrangement of the camera and microphone

The microphone was suspended at normal camera height and placed as shown, 6 feet from the center of the tripod supporting the camera Since this setup was used for all of the tests, the results are directly comparable from the point of view of sound insulation for the various camera silencing devices

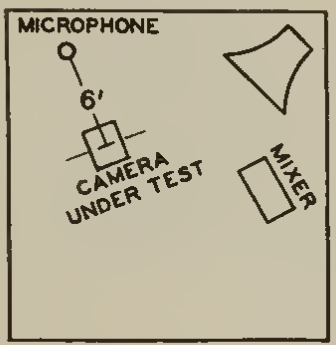


Figure 1

Figure No 2 presents a schematic diagram of the circuit employed, similar to a standard recording channel, with the introduction of an accurate variable attenuator The mixer and volume control dials were not used for the quantitative measurements but were set on their minimum loss positions

The method used in determining the noise from a given camera and associated motor was to measure the noise with the volume indicator A variable attenuator was adjusted to give standard deflection to the volume indicator, sufficient gain being provided by the amplifiers so that a definite attenuator reading could be obtained even for a quiet room The amplifier gains and volume indicator readings were kept constant throughout the series of tests The sound insulation value of the device under test, whether it be a blanket, bag, composition bungalow or metal housing will then be the difference between the attenuator readings for the camera and motor without and with the silencing device. Room noise during the tests was in all cases 5 to 10 db below the quietest camera condition measured

As a means of determining roughly the relation between the sound intensity obtained from the cameras with their silencing devices and the sound level occurring under talking picture conditions a few measurements were made of normal speech and whispering at a distance of 6 feet from the microphone that is, from the tripod position The noise from many of the cameras tested with the better silencing devices gave a sound intensity of the same order of magnitude as a loud whisper, and could not, therefore be used for very quiet scenes unless the camera is some distance from the microphone Since this condition exists, many of the cameras tested must be used at least ten to fifteen feet from the microphone in order that the camera noise will not be objectionably loud

The use of heavy steel tripods does not seem to contribute to noise reduction Wrapping blankets around the tripod legs seems to reduce the noise picked up by the microphone in some cases It is probable that excessive vibration in a camera caused by a defective mechanism loose film in the spools in the magazine, or loose gears in the motor drive, will be more readily transmitted to the legs and so cause trouble The effect of insulation of the tripod head has not been definitely determined

It should be kept in mind that elaborate silencing devices are not required in all of the places where the camera is used the report points out For outdoor shots, crowd sequences, musical sequences in fact most scenes where the camera is quite far from the microphone, only a moderate degree of sound insulation is required Pre-recorded and

(Continued on Page 44)

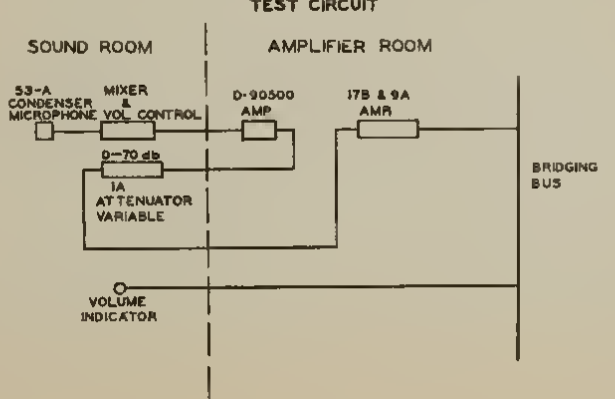


Figure 2

TALKIES FOR BUSINESS AND INDUSTRY

Metropolitan Sound Studios Enter Production Field for Business Sound Pictures By Deal With Western Electric

By PAT DOWLING

HUGE EXPANSION of the talking picture industry by opening up the commercial and industrial field is seen in a deal consummated between the Western Electric organization and Metropolitan Sound Studios of Hollywood whereby Metropolitan will immediately launch production of business and commercial talking films Under the contract Metropolitan Sound Studios which have been producing regular theatrical talking pictures for more than a year with Western Electric equipment becomes specially licensed by Electric Research Products Inc, a subsidiary of Western Electric for the production of all kinds of commercial pictures and its sound stages and apparatus and portable recording equipments become available for the use of industrial organizations for special talking films for educational promotional and other purposes for which the films will be of world-wide use in expanding trade

Making the talkies available for industrial and educational purposes means a tremendous increase in the production scope of the talking pictures it is said and is the next great step following the amazing success of talking and sound films in the regular theatrical field

Furthering the tremendous possibilities in the industrial field of talking pictures, Western Electric has recently introduced portable projecting outfits which will be used by business firms, factories civic and professional associations and trade bureaus to show the pictures which will be made and which will be an entirely separate and distinct field from the entertainment branch of the industry

With the designating of Metropolitan Sound Studios by Western Electric as a major producing base for the new type of pictures, operation of that studio for business pictures will be carried on in the same manner as it has been for theatrical films. Already some of the outstanding talking pictures of the past year have been made there such as Harold Lloyd's 'Welcome Danger' Caddo's 'Hell's Angels', Sono Art's The Rainbow Man' James Cruze's The Great Gabbo Christie Talking Plays and others comprising eighteen full length features and sixty-six short subjects

The same recording staff which has produced pictures for the theatrical field will handle the individual pictures to be made for commercial firms and organizations The Studios are headed by the Christie brothers who have been producers in Hollywood for the past nineteen years

The filming of industrial pictures it is expected, will stimulate business expansion abroad as well as at home because it will now be possible for the star salesman, on film to carry the factory and products visually around the world, addressing the people in any language The talkies will thus be a sort of super salesman of modern business Great avenues are also opened up for use by civic professional, and trade associations in educational work explaining factory processes health talks sales messages as well as addresses at conventions and gatherings of all kinds synchronized to moving pictures which are either new or old of related subjects

Recent examples of the value of talkies were shown when John D Rockefeller from his home, addressed via the talkies a gathering of the Standard Oil Company in Cleveland, Ohio and when an outdoor talkie of Mayor Walker was used in a political campaign on a prominent corner of New York City Many manufacturers are planning to have pictures made of their factories and processes to be accompanied by sales talks and run regularly at their branch offices in various widely scattered territories by the use of small portable projection outfits

Plans are also being made by several large organizations for talking pictures as demonstrations of their products to be shown at the next World's Fair in Chicago, and at similar exhibits in other localities

According to William S Holman, general manager of Metropolitan Sound Studios it is estimated that the new development following the deal with Western Electric, will add a million dollar production budget during the first year of industrial picture making to a plant which has already been turning out approximately five million dollars' worth of films per year

Dubray on Important Committees

JOSEPH DUBRAY, A. S. C., manager of the Technical Service Department of the Bell & Howell Company, has been appointed by President Crabtree of the Society of Motion Picture Engineers, to serve again as a member of the papers committee of that organization He is also a member of the standard and nomenclature committee of the same association

Freund In Hollywood

A NEW system of sound recording will shortly be introduced in this country by Karl Freund German studio technician and cameraman who recently arrived in Hollywood after several weeks spent in New York where he made interior scenes at the Paramount Long Island studios

Freund who produced the camera effects in "Metropolis," "The Last Laugh" and "Variety," is now under contract to the Technicolor Corporation

Anderson Treasurer E. R. P. I.

R E Anderson was elected Treasurer of Electrical Research Products Inc succeeding F L Gilman at a meeting of the Board of Directors held recently

Nearing 5000

World wide installations of Western Electric Sound Systems are nearing the 5 000 mark The latest report shows that 3 489 installations have been completed in the United States and 1,268 in the foreign field

Technicolor Gets Artist

ANDRE DURENCEAU French artist has been signed by Technicolor, and will join the color direction department of the company which cooperates with film producers in obtaining the effective color values Durenceau will work under the supervision of Natalie M Kalmus, wife of Dr Herbert T Kalmus president

New Color Surface Now Used by Da-Lite Screen

A NEW egg shell color surface replacing the former plain white which according to F. F Sturgis, general sales manager of the Da-Lite Screen Co of Chicago, is claimed to relieve eye strain and better adapted for the projection of color productions recently has been developed by the company

The company, which now has more than 4 400 sound screens installed in leading theatres of the country, has been manufacturing screens since 1909 and recently rearranged its factory facilities whereby it is in a position to produce 50 screens a day Arrangements are under way whereby theatres equipped with Da-Lite screens will be given liberal allowances on their old screens The new egg shell screen can be installed within 48 hours after placing of contract

The screen recently was tested by the Electric Testing Laboratories of New York, to determine its brightness characteristics and inflammability The results of the test proved that its reflection factor was 0 77 and the screen did not ignite when either a lighted match or Bunsen burner flame was applied to it

"COLORAMA" LIGHTING INNOVATION

New Lighting System Points Way to Hitherto Untouched Phases in Theatre Lighting

ONE of the most revolutionary steps in modern lighting that has been developed has just been perfected by F. J. Cadenas, illuminating engineer of the Atlantic Division of the National Lamps works of the General Electric Company. 'Colorama' is what it is called and description of this remarkable type of lighting is almost out of the question. The first installation is in the great ballroom of the St. George Hotel at New York City.

'An innovation in decorative lighting, consisting of a scheme of coves and flutes with lamps and color media so arranged as to give the desired color and shadow effects', is the way it is technically spoken of.

But to anyone who is visual rather than technical there is nothing of coves or flutes or color media about it—it is rather, a masterly way of painting with light. Nothing of the mechanical impresses you as you stand awestruck, watching this panorama of moving color and pattern, which has been styled, 'Colorama' unfold itself before your eyes.

F. J. Cadenas

Everett Rhodes Castle best describes it in Light' as follows:

'First there is a great ballroom windowless painted flat white. A great white room with an unobstructed floor area of 9,500 feet rising to a height of nearly 30 feet. No color! No familiar touch of flittering Cupids or spilling cornucopias. Nothing! And then in a remote control room someone pushes a button.

"You are hardly conscious of the soft green that steals like moonlight over the walls about you. As you stand there, wondering, delicate pastel patterns creep out of the "coves" and 'flutes" around the walls and in the ceiling. Traceries so fragile, so colorful, that you wonder by what magic they grew before your eyes. Within three minutes by roaring subway is the Battery and Wall Street almost within a stone's throw great liners lay at anchor and tugs tootle through oily water going somewhere in a hurry. But you are in a moonlit garden.

'And then the moonlight begins to wane. Dawn. Pale at first, and then suddenly glowing with shimmering ambers. Patterns lose their elusiveness and take on robust reds and yellows and greens. They play up and down the wall and across the ceiling constantly changing or remaining motionless at the command of the remote control room. Almost any combination and variation of gray, orange, yellow, purple, blue, green, red and cerise as well as almost endless variety of pastel shades."

Here you see the artist's conception of "Colorama," newest lighting system which makes possible the playing of Symphonies of Light so like magic that it is almost unbelievable

Even the engineers of the Lamp Works cannot tell how many shades or patterns may be worked out by this lighting system. They cannot estimate the number of possible color combinations or patterns. In the installation at the St. George hotel 6132 lamps with a total of 532,240 watss were used. Of this number 114,140 were in red, 181,775 in blue, 97,055 in green and 139,500 in clear or white light. Colored lamps are not used, color caps are used exclusively. Lamps vary in size from 1000 watt to fifty-watt lamps.

More than 82 miles of wire were used in installing the lights and sixty electricians worked nine weeks to make the installation. The control room has five hundred control buttons and there are more than 190 dimmer plates. This control board is like a mighty organ, only it plays a music of color. One operator may sit at it and have absolute control of the entire lighting.

The new lighting system essentially consists of two controllable factors. First, placing lights of various colors in front of and behind a series of vertically pleated flutes, these lights being reflected on a cove. Second, these colors form designs changeable at will, or other master patterns due to cutting off of the light rays by the flutes.

The result is that one operator may decorate a room for a morning wedding, change the scheme for a luncheon, adapt an entirely new conception for afternoon bridge party, paint college colors on the walls and ceilings for a fraternity dance and so on, ad infinitum.

The installation consists essentially of a remote-control switchboard with dimmer plates and a series of light troughs. The troughs contain electric light bulbs covered with color caps arranged in front and back of vertically pleated flutes which make the shadow and color designs. This equipment permits the use of fixed or moving designs and colors which may be changed by the control board operator. In addition to controlling the colors and patterns it is also possible to control the intensity of the illumination.

The lighting system for the walls consists of a series of four separate and parallel coves fitted with the vertically pleated flutes and clear lamps of various wattages, equipped with color caps. These are placed in both front and back of the flutes. The lighting system for the ceiling is a series of five inverted troughs, 10 feet wide.

(Continued on Page 36)

AS THE EDITOR SEES IT

Oh, Yeah!

NOW that public speakers are putting their speeches on sound tracks some of us will be saved a lot of embarrassment when we are forced to yawn, or perhaps take a short nap while the speaker is getting a mass of words out of his system. If the speech is too long, a bit of judicious cutting on the part of the committee in charge will do much to add to the enjoyment of those present, and no feelings will be hurt. But what a dirty trick someone could play on a speaker if he should add a little something in the nature of a slam at those present! Some advantage now in being on the speaker's committee!

Maurice Chevalier

RARELY does an actor appear who makes such a favorable impression in so short a time as has the great French star, Maurice Chevalier. Unknown to the general picture public he swept this public off its feet with his first appearance on the screen. And now in *The Love Parade*, he again captivates. The prettiest compliment paid Chevalier that we have seen is that of Robert E. Sherwood, who in the March issue of *McCall's* says:

"When Maurice Chevalier smiles, sings and struts in *The Love Parade*, one forgets that the movie camera and the movietone are mere mechanical contrivances that the screen is a dull two-dimensional surface and that, after all, there never can be a satisfactory substitute for flesh-and-blood actuality. For there is a magic in Chevalier which goes with his grin, his attitudes, his antics, and accompanies them on the perilous journey through the lenses of the camera and the tubes of the sound apparatus, and that magic glows forth from the screen and warms and stimulates and delights the audience."

The Love Parade is not a sensationally entertaining picture. A mixture of music, romance, satire and low comedy, it has its obvious ups and downs, and of the latter there are far too many. But it has Chevalier, and it also has a few evidences of the directional genius of Ernst Lubitsch.

Three cheers, Mr. Sherwood, we think so, too.

Resolutions

TWO months have passed since we all decided that we would do bigger and better things this year. I wonder how many of us have kept our resolutions!

The other day a friend of mine was telling me that he and his wife had decided to adopt another absolutely new set every two months this year. Not a bad idea at that, especially if we have forgotten to live up to some of those made when the wild bells were ringing out the old year and ringing in the new. Why wait for a whole year to pass before resolving to do good if we happen to have passed up an odd resolution or two!

Publicity

THERE is an old slogan among publicity men to the effect that one line in the paper or magazine is better than a page in the waste basket. And the really successful publicity men of the motion picture business, whether handling stars or business firms, usually follow that slogan pretty closely.

However, there are those who persist in writing pages of copy when a half dozen lines would tell the story very nicely, and these wonder why their stuff never appears. The editor of this magazine is a graduate of the publicity ranks and has a soft spot in his heart for all publicity men and, if the story has any merit at all, will usually give some space to it. But—he appeals here and now to all writers of news items for the various organizations to save paper and effort. Of late stories running from one to four typewritten pages have come to this office when each story could have been told in three sentences. And still the publicity writers wonder why their stuff reaches the waste basket instead of the printed page. Brevity is not only the soul of wit but is the open door to the printed page, providing it is something of interest. Executives please pass this along where it will do the most good.

Broadway vs. Hollywood

WE WONDER what those misguided souls who thought the talkies would move Hollywood to Broadway, are saying these days when Hollywood Boulevard looks like Times Square and the lobby of the Roosevelt Hotel takes on the appearance of a combination of the Astor, the Algonquin and 729 Seventh Avenue!

Honestly, Broadway's famous are so thick in Hollywood that they are making derby hats look almost natural out here. Stage players who refused to go even as far as Boston or Chicago, piano tinklers from Tin-Pan Alley, who swore that music couldn't be written outside of New York, writers who firmly believed that they couldn't write unless in the Manhattan atmosphere—all are here now. And, strange to say, many of them who used to call this a "hick" town are now speaking of "our town."

Industrial Movies

THE importance of industrial motion pictures has long been recognized by the business men and manufacturers, but in the mad race of the entertainment producers this branch of the picture field has been given comparatively little thought. However, with the coming of such concerns as Western Electric into the business it was a natural conclusion that industrial picture making would receive attention.

The first outward step in this direction has been taken and the above-mentioned company has joined forces with Metropolitan Studios in Hollywood for the production of industrial talkies. What this will mean to business and business methods of the future is a problem, but that it will bring big changes in sales methods seems certain. It does not take much imagination to see a roll of film being shipped to a distant town or city by a business house. It goes to a merchant who sits down and listens to the sales talk and looks at the product as voice and picture come from the film. In the past the commercial films which have become widely used, have been know as silent messengers. Now they need be silent no longer.

With the big producing companies branching into this line it behoves the hundreds of "industrial photographers" throughout the country to get sound equipment and keep pace with the times. If they hesitate they probably will be lost in the shuffle.

Screen Credit

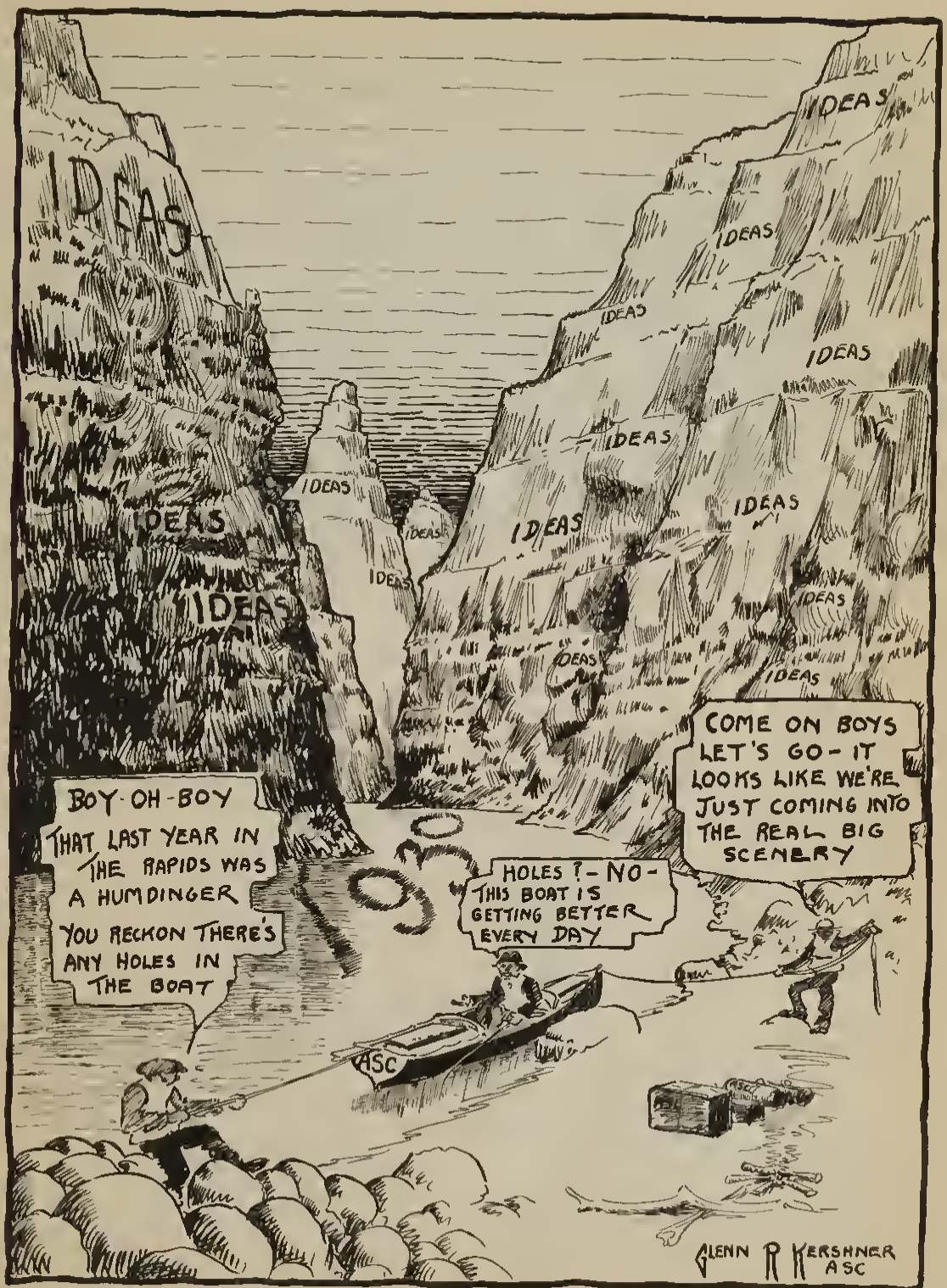
EVERY now and then some picture company starts a move to take screen credit away from the Cinematographers. It has happened in Hollywood more than once to the shame of the companies who have done it.

What this writer cannot understand is why a picture executive should wish to deprive a cameraman of this small reward for artistic endeavor. After all, the Cinematographer is the greatest *artist* connected with the making of a picture. It is he who brings to the screen the ideas and dreams of those who can only wish for something. It is the cameraman who by his artistry frequently makes the public forget that the story is terrible as they gasp at the beauty of the photography.

Then why not give him a line on the screen telling who did the work? One would not dream of removing the name of an old Master from one of his paintings. Aren't these men Masters of an art? Don't they deserve, at least, a meagre reward along with many of those executives who never have a thing to do with the making of the picture?

American Annual of Photography

AN UNUSUALLY fine piece of work is the 1930 edition of the American Annual of Photography. The American Photographic Publishing Company of Boston is to be congratulated in this issue. No lover of the art beautiful should be without it. And the articles contained therein are interesting, constructive and practical. All in all an excellent publication that this writer would not be without.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1930
BOY-OH-BOY
THAT LAST YEAR IN THE RAPIDS WAS A HUMDINGER
YOU RECKON THERE'S ANY HOLES IN THE BOAT
HOLES ?- NO - THIS BOAT IS GETTING BETTER EVERY DAY
COME ON BOYS LET'S GO - IT LOOKS LIKE WE'RE JUST COMING INTO THE REAL BIG SCENERY
ASC
GLENN R KERSHNER ASC

WELL, WELL, WELL!

HERE you have the Actor's point of view, outlook or what have you what the Actors do while a picture is in progress. Here is the Actor's outlook on a Paramount set while they were emoting. In this particular picture you see Director R. V. Lee, with stool for desk, directing George Bancroft in "Ladies Love Brutes". The studious gentleman with the cap is Harry Fishbeck, cameraman. In other words, on the screen you see

Silents for Russia for Long Period

THAT silent pictures will be the rule in Russia for some time to come is the opinion of Leon I Monosson President of the Amkino Corporation, who recently returned from a Russian trip

In Soviet Russia,' he reports ' the Russian engineers have worked out and are applying their own inventions for sound recording and reproducing Because of the tremendous progress that they are making with sound and talking motion pictures and the technical achievements of production of sound apparatus in the United States the people connected with the motion picture industry in Soviet Russia are very much interested in the development and success of the sound films in the United States

In Soviet Russia, the Russian engineers have worked out and are applying their own inventions for sound recording and reproduction apparatus Leningrad and Moscow have their sound studios, one each and they are at present producing short subjects and making plans for feature productions In one of the best theatres in Moscow there is now installed a reproducing set of RCA and there are installations of Russian systems In the near future there will be sound reproducting apparatus installed in the theatres of the larger cities At the present time the largest motion picture companies of Soviet Russia have groups of scenario writers, directors, artists musicians and technicians all studying and developing new methods and forms different from those already applied in other countries Educators together with actors are working on sound educational films Several pictures that are in production at the present time under the directorship of men like Eisenstein, Pudovkin and Dovzhenko will have not only the original silent version, but also sound version

It is probable that in a very short time a large group of directors cameramen and technicians will visit the United States to study these achievements This commission, together with Amkino, will negotiate with American concerns regarding sound equipment for the new sound studios and also about joint production of sound motion pictures

A "Gaffer" Poet

THE following bit of verse was written by Bill Jones, a "Gaffer" at Paramount Studios Hollywood A Gaffer" is the chief electrician on a motion picture set. Bill like other Gaffers" takes a lot He rebelled poetically and gave Vic Milner A S C the following

Night Work

Bill Jones

Synchronizing interlocking
All night long
Directors cursing while rehearsing
All night long
We re the chumps who take the bumps
If anything goes wrong
Cause we're the ginks who run the inks
All night long

Hear the laughter of the gaffer
All night long
No more cables—bug-house fables
All night long
In sound stages—seems for ages
From sunset until dawn
Damn small wages to work in cages
All night long

Between Guy and Vic they make yuh sick
All night long
The dirty scamps they're moving lamps
All night long
They shove them here and move them there
An' then begin to swear
You talk back—and get the air
All night long

In Fine Wood

—It's Grain

In Eastman Panchromatic
Type Two Negative

—It Isn't

Reach For Eastman

—It's Lucky

J. E. BRULATOUR, Inc.

HOLLYWOOD CHICAGO NEW YORK

Appreciation

ONLY DAILY NEWSPAPER IN RICE COUNTY — ASSOCIATED PRESS TELEGRAPH SERVICE

THE LYONS DAILY NEWS
PAUL A. JONES EDITOR
LYONS KANSAS 1/26/30

Dear Mr. Polito,

You may think it strange to receive this kind of a letter from one you don't know or care to know, but I must get this off my mind. Being something of a cinematographer (having made a long herd study of it) I believe that I know cine photography when I see it, and have some right and authority to criticize. Now to get to the point I want to talk about. I have just reviewed "The Isle Of Lost Ships" of which you were the chief cinematographer and I must say that it surpasses by far anything that I have ever seen in the way of cine photography. You are to be highly complimented for your achievement on such a masterpiece. (No doubt you have received higher praise for your work on this picture by critics who are critics, at least you should have.) In my opinion it is far better than "Noah's Ark", "Ben Hur" or any of many other wonderful pictures that I could name. Mr. Fred Jackman is also to be congratulated on his special photography as it was extraordinarily fine and shows masterful technique. We cannot go further without saying that Director Willat and a fine cast also comes in for their share of the praise, but they are only secondary, because without the man behind the camera (a man with the eye of an artist and the brain of a genius)there would be no picture.

There are fans who write to their favorite actors or actresses and tell them of their appreciation, but my appreciation goes to the boss, that great body of men that makes the cine theatre possible to this great American public and to the whole world. I hope that you will take this appreciative note from a fellow who has the same interests at heart.

I remain as ever yours for Bigger, Better and Finer Cinematography,

Richard D. Smith

Richard D. Smith
304 West Ave., N.,
Lyons, Kansas

Answer to this address if you care to.

Honor Where Deserved

THE above letter speaks for itself. It was received by Mr. Sol Polito, A. S. C., after the picture he had photographed had been released, and when most critics were showering praise on the stars. After all, the Cinematographer is an artist, and it makes him feel better to know his work is appreciated. The Editor takes this opportunity to express not only Mr. Polito's appreciation, but that of all Cinematographers for his letter.

Progress and Lighting Equipment

(Continued from Page 9)

those of us who are qualified to remedy it—the cinematographers and studio and factory lighting engineers—can do our duty to ourselves and to the industry and meet it

Of course no one acquainted with the practical requirements of studio lighting could even dream of finding a single unit capable of meeting all the diverse demands of modern conditions None of us ask the impossible But is it not possible to apply the principles learned from scientific research and studio practice to the design of a series of standard units which would be truly efficient for a greater range of purposes? Practically all of the mechanical processes and apparatus of the industry have been subject to a highly beneficial standardization —except the all-important matter of lighting equipment And while the application of that equipment is and always must be a matter of individual style the standardization of the physical lighting units is possible and will benefit the entire industry

The present-day light-sources—the Mazda bulb and the carbon arc, are in themselves tolerably efficient and well standardized But the physical housings in which they are contained leave much to be desired In the first place it is extremely doubtful if they ever were designed in the scientific sense of the word They have far more the appearance of having been adapted from some other service Aside from their bewildering and needless multiplicity, they are as every cinematographer knows in many cases grossly inefficient Ignoring the serious questions of 'spilled light' 'ghosts' and 'flares', if the modern lamp housings operated with an efficiency anywhere nearly comparable with that of the majority of studio apparatus—or even with that of the light-sources they house—there could be no complaint possible for the increased efficiency would in itself reduce the number of units needed for any given area and would in a great measure counterbalance the lack of adaptability and standardization As it is I am convinced that with proper design not only can greater efficiency be realized but a series of larger standardized and more generally adaptable units be evolved which would be eminently worth while for everyone from the highest executive down to the lowliest member of the overworked 'juice crew'

In suggesting this, I do not believe that I am asking the impossible No single unit could serve all purposes but to my mind, a scientifically designed series of truly efficient units is possible, and most desirable To that end both as an individual and as chairman of the A S C Research Committee let me express my willingness to aid in bringing about the improvements that I have here outlined

500th Installation

THE 500th installation of a Western Electric Sound System in the British Isles has been completed at the Palace Theatre, Ebbw Vale, Monmouthshire which opened its talking picture program with "The Broadway Melody" The Palace is an 880 seat house located in the heart of the coal mining industry

Scene in inspection room of Bell & Howell's new Engineering Development Laboratories, daily engaged in solving today's cine industry problems, and planning new designs for the cinemachinery which will produce the movies of the future

Bell & Howell Accuracy Begins in the Test Tube

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TECHNICIANS INVESTIGATE ARCS

Intensive Survey of Methods to Silence Arcs Now Under Way in Hollywood

QUANTITATIVE tests of methods used to filter out noise in the operation of carbon arc lights in recording talking pictures are being conducted under the direction of the Academy of Motion Picture Arts and Sciences. The tests were preceded by a survey of Hollywood studios by L. E. Clark, acting as a representative of the Producers-Technicians Joint Committee of the Academy.

The problem of reducing the noise incident to the operation of arc lights has been one of considerable significance since the advent of sound pictures as sensitive microphones pick up the hum of the arc.

The first test was made February 25 at Metropolitan Studios following a meeting of the heads of studio electrical departments. Arrangements have been made for the cooperation of the City of Los Angeles Department of Water and Power in conducting the investigation which for the first time will provide exact data on the generator systems of all the studios.

The tests will be made at fifteen studios using arc lights during the next month.

Each studio will be furnished with an analysis of its commutator ripple which will show the amount of filtering necessary to quiet the arc lights used. The plan of procedure calls for a tabulation of the amount and kind of hum present in various types of generators. Oscillograph records will be made. The amount, fundamental frequency and approximate wave shape of the commutator ripple will be reported. At the same time data on the generator units will be secured. The maximum amount of ripple allowable will be determined and, from the results of the first survey, a representative studio will be selected for further study.

Facilities will be made available for listening to arc lights in a manner similar to that used in the camera silencing investigation recently conducted under the auspices of the Academy.

Three different methods are now in use for silencing arc lights in the studios, it was revealed in a preliminary survey. Amounts of arc lighting now in use and types of filter favored were indicated as follows:

Amount of Arc Lighting in Use

Per Cent Arcs	*Studios*
None	Warner Brothers and First National
5 to 10%	M-G-M, Educational, Columbia, Tiffany, Tec-Art, Universal, and Hal Roach
25 to 50%	RKO, Pathe, Paramount, Metropolitan, United Artists, Sennett
90 to 100%	Fox Studios

Types of Filter Used on Arcs

Type	*Studios*
None	Hal Roach
Individual Choke Coils for each Lamp	RKO, Paramount, Universal, M-G-M, Educational, Columbia, Tiffany, United Artists, and Fox
Chokes to Handle a Group of Lamps	Pathe, Tec-Art, and Educational
Filter at Generator	Metropolitan and Fox

Special apparatus has been designed so that the tests of generators can be made while the studios are in production.

L. E. Clark is representing the Academy Producers-Technicians Joint Committee sponsoring the investigation. Irving G. Thalberg is chairman of the committee. O. K. Buck and E. G. Alberts are representing the Los Angeles Department of Water and Power.

The following technicians have been appointed by the studios to take part in the investigation:

Studio	*Technical Representative*
Columbia	Denver Harmon
Educational	George Mitchell
Fox	Walter Quinlan
Metro-Goldwyn-Mayer	L. J. Kolb
Metropolitan	R. S. Clayton
Paramount	R. W. Kratz
Pathe	William Whistler
RKO	William Johnson
Hal Roach	W. P. Lewis
Mack Sennett	Paul Guerin
Tec-Art	Lester Tracy
Tiffany	L. E. Myers
United Artists	Thomas Moulton
Universal	Frank Graves
Warner Brothers and First National	Frank Murphy

Sound equipment truck of the Commercial Film Laboratories, Oakland, Cal., equipped with Fearless Dramaphone recording device, and prepared to make pictures in either black and white or multicolor

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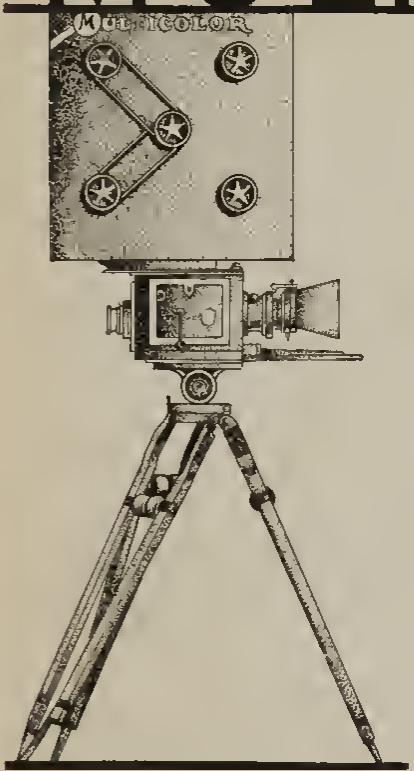

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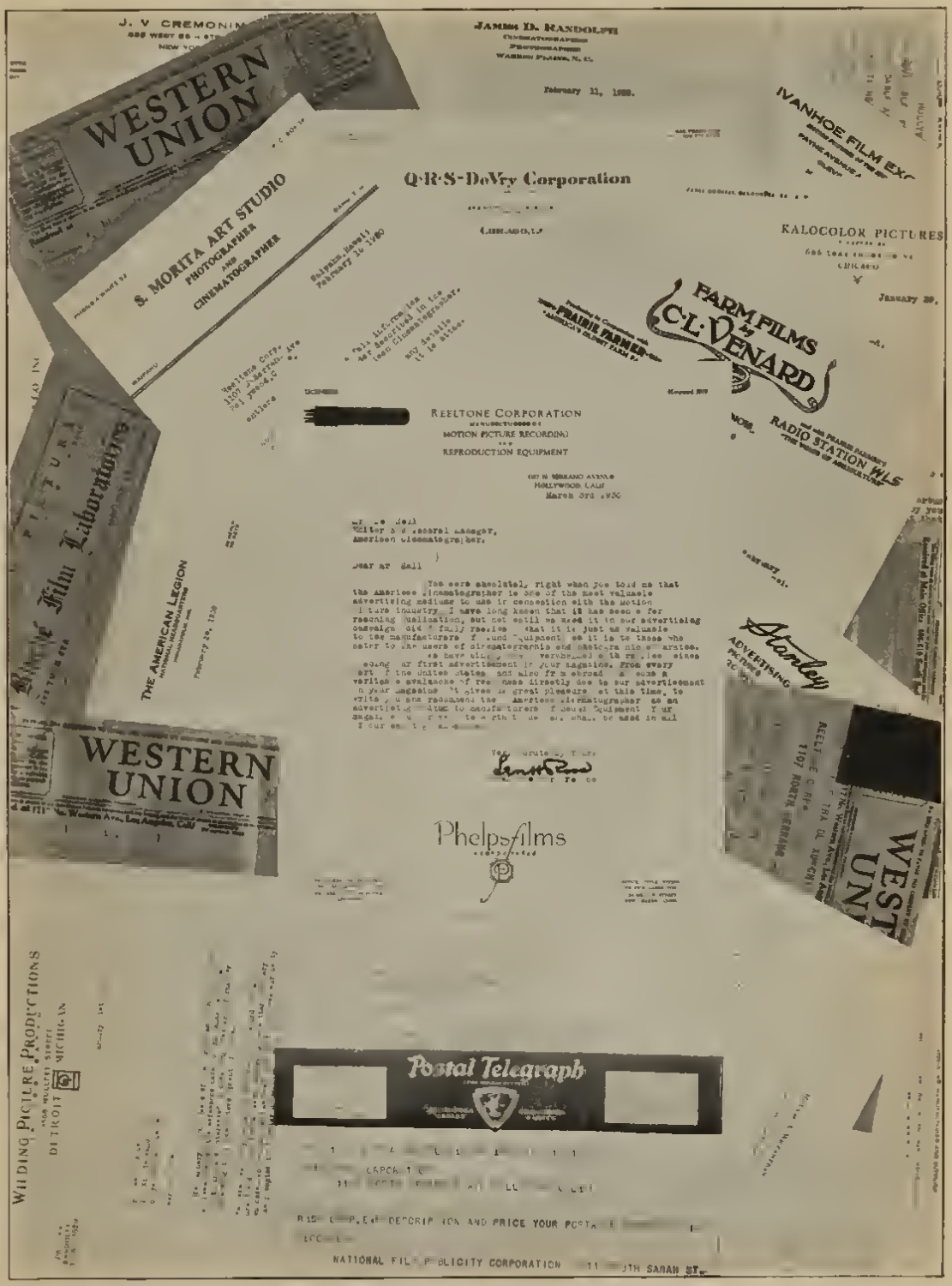
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"FORE"
Speaking of tees, how would this one interest you, Mr. Golfer?

Horst Color System

A BRITISH trade paper described an exclusive demonstration of the 'Horst' three color process which is to be used for the filming of sequences in conjunction with British Instructional Films, Limited. The color film shown reached a very fine standard of quality, with a complete absence of fringing. Three primary colors are used and the color tones produced are very natural. A slight softening of the focus is observable, but this can be attributed to the special projector lens used at the demonstration—this was a simple type that had not been fully corrected for aberration. A properly corrected lens will shortly arrive in Great Britain when a demonstration will probably be given to the trade. The results already achieved are extremely promising. The prints are black and white prints, undyed, and cost no more to produce than ordinary film, it is stated.

Developing Tests on Location

IT HAS always been customary with many cameramen to make tests on location. Especially true is this during the winter months and on more distant locations, where light conditions are found to be very often entirely different from those in and around Hollywood.

If you are lucky enough to have access to a good darkroom you can make tests under almost the identical conditions as those found in the studio.

Where a darkroom is not available use is made of a test box consisting of a light-tight box with a slot on top for the film and two Mason jars, one with developer and one with hypo. A pair of black "pants" from similar material as that used in loading bags, pulled over hands and arms, and connected light-tight to the box, allows the film to be handled safely inside. Nearly always the rinsing water is omitted in order to keep the dimensions of the box down to the minimum.

The ideal for tests—studio condition—is only considered to such an extent that the developer and hypo are taken from the tanks there and carried along in the Mason jars.

The same results are desired, but not to be expected as several factors, of which temperature is perhaps the most important, are entirely neglected on location. A test box of this kind is only an unreliable and inconvenient necessity.

Considerable experience with tank development has shown me that this method may be successfully used for tests on location. The development particular to each studio can be duplicated with very little extra effort.

Fresh chemicals may be mixed on location or taken directly from the studio in well-corked bottles. The entire test-box can be dispensed with and replaced by the smallest developing tank on the market, on the order of the Dallan tank. This one can be filled or drained without opening the entire box and exposing the film.

The loading, of course, has to be done in the dark. For this purpose I carry an old-type loading bag along. There is hardly enough room in one of those to reload the large one-thousand-foot magazines, now in use, but there is ample space for one magazine and the small test tank. A test of a film of any width may be handled this way, whereas the old test boxes are only made for the 35 mm. standard.

The temperature of the developer, usually kept at 65°F., is obtained and maintained by placing the tank in a pail of water of the correct degree. The metal easily equalizes any difference in temperature between the outside water and the developer inside. It is perfectly safe to use the developer several times if the tank is thoroughly rinsed after each use.

Compact, clean, correct and convenient, this way of making tests will be found superior if once given a trial.

—HATTO TAPPENBECK, A. S. C.

Wilding Represents Fox-Hearst In Nine Central West States

THE Fox Hearst Corporation of New York City, Commercial Division, licensed by Western Electric Company to produce Movietone Talking Pictures for commercial and educational purposes has appointed the Wilding Picture Productions Inc. of Detroit, as their exclusive sales and production representatives for nine Central West states. A branch office is established in Chicago, and others will be opened in the near future at strategic points to keep pace with the expansion in the use of commercial Movietone motion pictures.

This appointment has been made in recognition of the important part Wilding Picture Productions Inc., has played in introducing this new medium of communication to the industrial enterprises of the Central West. Among the many nationally known institutions who have utilized Fox Hearst Movietone productions in their sales promotional and educational work, are such familiar names as Studebaker, Graham-Paige, Dodge Brothers, Majestic Radio, International Harvester Company, Chicago Daily News, Standard Oil Company, Western Union, Vogue Magazine, Indian Refining Company, Armour & Company, National Electric Light Association, Chevrolet, the United States Army and the American College of Surgeons.

Mr. N. E. Wilding, President and General Manager of the Wilding Picture Productions Inc., assisted by Mr. X. F. Sutton, is in charge of the commercial Talking Picture activities of this organization.

WORLD'S LARGEST "INKIE"

THE biggest lamp in the world, with enough candle-power to illuminate several hundred average sized homes, is now at the Metropolitan Sound Studios in Hollywood, ready to shine on the group of stars from the various producing companies such as Harold Lloyd, Christie, Caddo, Sono-Art and others who are making talkies there.

This latest achievement in the collection of the "world's largest" is the biggest piece of lighting equipment turned out to date by General Electric, and has a fifty-thousand watt globe in it, containing enough tungsten filament for 156,000 ordinary sized house lamps. It is said that the monster light can throw a concentrated beam of 12 million candle power.

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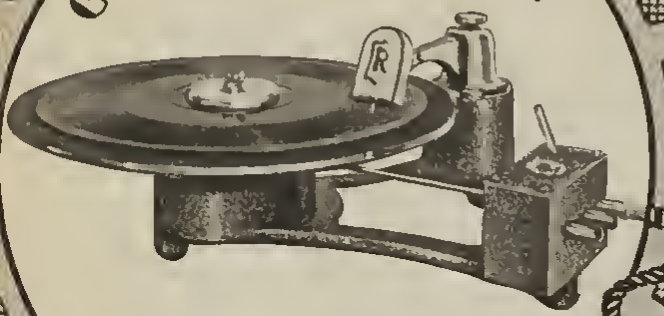

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By WILLIAM STULL A. S. C.

'Twixt Winter and Spring

TO MANY amateurs of both still and motion photography, this particular time of year midway between winter and spring seems to offer very little chance of satisfying the photographic urge. In the first place the weather is seldom even remotely near the ideal for outdoor work and in the second place the class of subject offered often seems too utterly prosaic and drab to be of artistic interest. Nevertheless the season offers unique opportunities which really make worthwhile the effort required to seek them.

For instance many phases of the breaking of Winter's grip have excellent cinematic possibilities. In those sections of the country where the rivers are ice-bound the break up of the ice with its attendant jams and ice-gorges offer the watchful camerist spectacular possibilities particularly if he is fortunate enough to possess a long-focus lens for telephoto shots. And the occasions when such jams endanger important bridges etc. and have to be either dynamited or bombed from the air are surely worth shooting. Incidentally these subjects offer the user of a 35mm outfit a handsome chance of profit for despite the enormous popularity of the talking newsreel there are still silent editions made to take care of the thousands of theatres yet unwired. All of the major news firms therefore still issue silent releases for these houses while two of the major reels—Kinograms and the Universal-International—are still exclusively silent. In addition it is no trade secret that the various Movietone news firms have ways and means of introducing artificial sound effects into exceptional silent shots. For the 9.5mm or 16mm enthusiast this outlet of course does not exist except in cases of the most outstanding and exclusive events, but there is always the possibility of making a sale of even the sub-standard film to the makers or distributors of the explosives used.

Similarly, in the more northerly districts the spring break up also means the start of the tremendously spectacular log-drives which if covered with reasonable thoroughness form a distinctly interesting addition to the individual screen library.

Of course much of our country is not blessed (or afflicted) with such spectacular early-spring events as these but most of it does find that with the first thaws the rivers are subject to freshets or even sizeable floods. In any case these, too, make interesting subjects for either still or motion photographers. They must however be treated somewhat differently from the more unusual ice-jams and log drives for while the breaking up of a threatening ice-pack is sufficiently dramatic to carry a hundred feet or so of film on its own merits these flood films should be built with some sort of human interest to give point to the situation not necessarily a dramatic story but at least a continued thread of personal interest to keep the film from degenerating into a mere series of animated snapshots. If the situation is grave enough to be more or less a public menace an astute cinematographer can often make his films serve a civic purpose as well by arranging with the inevitable organizations seeking to curb the menace—an arrangement which will at least bring him prestige and perhaps profit.

Stock Shots

Even if the time or the purse do not permit the making of complete reels of these between-time subjects it is well to secure some footage of them while they are available. In the first place it affords valuable experience in coping with unfamiliar subjects and light-conditions and in the second place, it adds to the library of stock shots which every cinematographer should maintain. Such scenes may not be immediately useful but if they are intelligently made and carefully preserved they are very likely to meet some urgent need at a future date. For this reason most of the big studios maintain enormous libraries of stock scenes. In some cases these libraries contain millions of feet of film carefully indexed and filed in such a way that any individual scene or type of scene is instantly available when required. Many of the scenes in big productions portraying foreign locales have been taken from these stock libraries and judiciously cut in with scenes taken on the Hollywood lot or even used, by means of special process work, as animated backgrounds for the action of principals who have never left Hollywood. And these stock scenes are by no means all discarded clippings from previous productions. Quite the reverse, for often special cameramen (and now sound-men too) are sent clear across the world to secure scenes expressly intended for the stock library. Incidentally there are a number of privately owned stock libraries to whom the 35mm amateur can often dispose of his work.

Rainy-Day Cinematics

Another important if less spectacular opportunity offered at this season is that of securing rainy-weather films. While few of us are probably as pictorially-inclined as one enterprising experimenter who made a complete reel of cinematic impressions of rain we can all find much of pictorial interest in this grey moist mood of nature. Thanks to the faster lenses which are becoming so universally popular for cinematic equipment these dark days are not the terrifying impossibilities they were a short while ago. On the contrary their possibilities are beginning to be revealed. Artistically they enable one to paint his screen picture with bold strokes eliminating if he wishes much that is unessential and even achieving impressionist simplicity. Furthermore from a photographic standpoint the opportunities for unusual effects are unexcelled for with the interesting reflections obtainable on the wet pavements and the exceedingly

easy contre-jour effects obtainable with the clouds serving as heavy diffusers for the light such weather offers a new and unique mood for pictorial cinematography.

Another pictorial aid at this season is the slight mistiness veiling distant landscapes This mistiness is quite a different thing from the rather objectionable haze of later months being generally quite desirable, and rarely photographically incongruous as the foreground action will be usually lit with a softer light which keeps the entire picture in a single mood

Still another advantage of early springtime is the fact that the light comes at all times from a flatter angle making it possible to secure artistic effects closer to the middle of the day than will be possible in a month or so when the noon day light is more nearly a top-light, and renders quality work impossible Also this same lower angle of the light makes for much greater effectiveness and ease in back-lighted scenes In this connection however the absolute importance of an adequate lens-hood cannot be too greatly stressed. Especially with the newer super-speed lenses an adequate lens shade is vital, for otherwise ordinary shots suffer from all manner of flare and barrel reflections while back-lighting effects are simply impossible

Finally as the light at this season is so extremely uncertain, the safest way for even an expert to judge his exposures under these unusual conditions is by the constant use of a dependable exposure-meter like the Cinephot, or others which actually measure the light reflected by the subject For after all, there is only one unfailing rule for exposure possible always use an exposure-meter to measure your light until your eye has had the vast amount of experience necessary to do it unfailingly itself

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A British View of Amateur Films

IT IS ALWAYS interesting to know what one's neighbors are thinking of doing This is quite as true in amateur cinematography as in any other field, consequently such books and magazines dealing with the subject as come across the water to us are always interesting reading One of the latest of such books to reach us is *Amateur Cinematography*, by Capt Owen Wheeler. F R P S. and publisbed by Sir Isaac Pitman and Sons, of London and New York

As a writer on various phases of still photography, Capt Wheeler is almost as well known to American readers as he is to his fellow-countrymen In this, his first book on cinematography, Capt Wheeler does not attempt to plunge deeply into any phase of his subject but merely to so survey the field as to satisfactorily orientate the newly-arrived amateur from the field of still photography and to give him a sufficiently firm foundation to enable him to carry on his further study of cinematography with a sound knowledge of the fundamentals In this Capt Wheeler succeeds admirably He covers all of the essential points very competently, though briefly

Of special interest to American readers will be the descriptions and illustrations of a number of European cameras and projectors as yet unknown here, and the considerable space he devotes to the Pathex 9 5mm system which, while it has numerous devotees in this country, has by no means as yet attained the following it has deservedly gained in Europe

Another important feature is the comparatively large space devoted to the development and printing of amateur cine film Despite the excellent laboratory facilities available for processing amateur films, there are undoubtedly many cine amateurs in this country who either would like to process their own films, or are already doing so To them Capt Wheeler's treatment of the subject will prove at least interesting, and probably very helpful, as he gives not only the various formulae required but a number of very useful and practical hints and "dodges".

If one has any criticism of the book at all, it lies in the fact that the tremendously important subjects of editing and titling are rather hastily slurred over and that, considering the author's previous excellent writings on the subject of Telephotography, the section on lenses is unnecessarily brief Another point that might be mentioned is that the book, while a competent treatise on its subject, is intended slightly more for the amateur who has a foundation of a slight knowledge of still photographic procedure than for what an Englishman would call an *ab initio* amateur However considering the universal spread of amateur still photography these days this view is far from wrong

Taken as a whole therefore this little handbook serves its purpose admirably and, especially in view of its treatment of European apparatus and methods is sure to be of interest to the amateur cinematographers of the new world

Sound Aids Exports

SOUND pictures are directly responsible for the large increase in exports of American pictures, according to a survey of 1929 exports made by N. D Golden of the M P Division of the Department of Commerce. During 1929, it is disclosed 282,215 480 feet of American films, at a declared value of $7,622 316, were exported as against 222 122-586 feet valued at $6,473,990 during 1928

The advent of sound pictures abroad the foreign producers' inability to produce sound pictures his fear of producing silent ones, gave to the American producer an open field in the past year in marketing of an increased number of silent pictures, are other factors that have helped to make American export the largest in the history of the industry, continues the report

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THE NEW AMPRO PRECISION PROJECTOR

Chicago Firm Brings Unusual 16 mm. Projector on Market. Sales Policy Directed by Julius Keller, Jr.

VERY nearly everything the amateur needs for *making* good pictures has been placed within his reach, so it is with a great deal of interest that we note activity in the direction of improving 16 millimeter projection and in lowering the price of projection equipment

We are speaking of the new Ampro which made its debut but a month ago as a product of the Ampro Corporation of Chicago

The new Ampro presents many really interesting features which not only raise the standard of home projection to the class of professionalism, but which also give amateur films a greater chance to be enjoyed than they have had in the past

There are two models of the new Ampro The standard model employs a 200 watt lamp, and the Super-lite model uses a new 20 volt, 250 watt unit Unusual claims are made for the illuminating and optical systems of both models The 110 volt Ampro with its focusing reflector and adjustable lamp base is said to deliver far greater light to the screen than has been possible to obtain with this type of lamp heretofore Bright, snappy pictures in a light room are easily possible and heavy, dense, underexposed reversal films ordinarily unsuited to satisfactory showing are projected with good brilliance and satisfactory detail The 20 volt Super-lite model is intended for use where pictures of superlative brilliance and definition are desired This is not only intended for home, industrial and educational uses, but is especially well adapted for use in schools, churches and other uses demanding large brilliant pictures Both models are identical mechanically and in appearance, with the exception that The Ampro Super-lite has a sub-base to contain the voltage regulating transformer for the 20 volt lamp

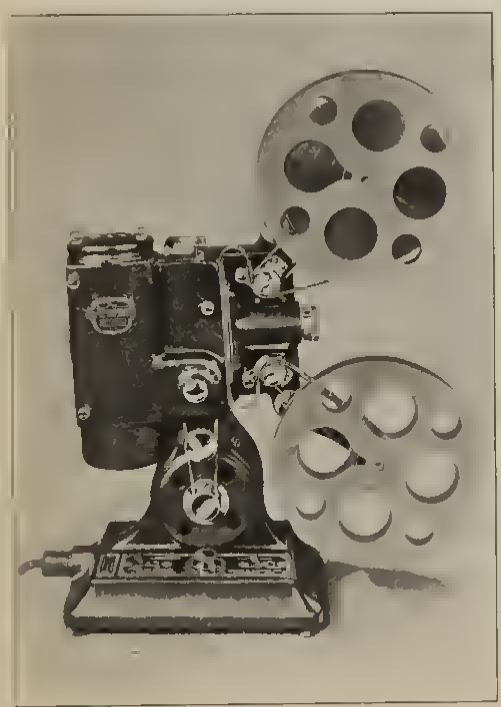
Rather radical departures from orthodox 16 Mm projector design are current throughout this machine s entire make-up. Gear trains are all arranged so that metal runs against fibre This of course, lessens noise and minimizes wear Noise, in fact, is so greatly reduced in the new Ampro that little is heard other than the whir of the motor

Steadiness is another Ampro feature This is accomplished with a 9½ to 1 movement and with an entirely new type of tension system The latter consists of two independent edge tension plates operating within the main pressure plate This system by controlling a considerable length of film both above and below the aperture, yields absolute steadiness with less pressure and consequent wear on the film than the more ordinary methods

The centralized control feature of The Ampro is unique, to say the least All the controls—the start-stop switch, the forward-reverse-rewind switch and the speed control are all grouped on one plate, mounted on the projector base. The tilt knob is immediately above and the stop button for "stills" is right above that. Incidentally, The Ampro projects the sharpest brightest stills you ever saw without even a sign of a blister

The framer, which operates back of the film, is controlled by a knob on top of the housing The entire control arrangement is so planned that the operator can make the projector do all

(Continued on Page 36)



The New Ampro Precision Projector

Julius Keller, Jr.

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Accurate, Authoritative Information of Special Interest to Those Engaged in Motion Picture Production, Theatre Projectionists and Managers, Amateurs, and Technicians in Related Industries.

The following papers are included in the Digest:

THE NATURE OF SOUND *by* Professor A W Nye. *head of Physics Department, University of Southern California*—THE NATURE OF SPEECH AND HEARING *by* Dr Vern O Knudsen. *Associate Professor of Physics, University of California at Los Angeles. Vice-President, Acoustical Society of America*—ARCHITECTURAL ACOUSTICS *by* Dr Vern O Knudsen —THEATRE ACOUSTICS FOR REPRODUCED SOUND. *by* S K Wolf *Theatre Acoustics Engineer, Electrical Research Products, Inc., New York City*—THE ILLUSION OF REALITY IN SOUND PICTURES. *by* Wesley C Miller, *Chief Transmission Engineer, Metro-Goldwyn-Mayer Studios*—MOTION PICTURE SOUND RECORDING BY RCA PHOTOPHONE SYSTEM. *by* R H Townsend *Supervising Engineer for RCA Photophone West Coast Studios* —MOTION PICTURE SOUND RECORDING BY FOX FILM COMPANY, *by* E H Hansen, *Operating Head of Movietone Division, Fox Studios*—PHOTOGRAPHIC CONTROL IN VARIABLE DENSITY RECORDING. *by* Wesley C Miller, *Chief Transmission Engineer, Metro-Goldwyn Mayer Studios*—MOTION PICTURE SOUND RECORDING BY WESTERN ELECTRIC METHOD *by* Dr Donald MacKenzie, *Technical Service Engineer, Electrical Research Products Inc*—REPRODUCTION IN THE THEATRE *by* S K Wolf, *Theatre Acoustics Engineer, Electrical Research Products, Inc*—REPRODUCTION IN THE THEATRE BY RCA PHOTOPHONE SYSTEM *by* John O Aalberg, *Reproduction Supervisor, R-K-O Studios*—ACOUSTICAL CONTROL IN RECORDING *, *by* J P Maxfield, *Recording Engineer, Electrical Research Products, Inc*—RECORDING SOUND ON DISC*, *by* Col. Nugent H Slaughter *Chief Engineer in Charge of Recording for Warner Bros Vitaphone Productions*—RE-RECORDING (DUBBING) *, *by* K F Morgan *Development Engineer, Electrical Research Products Inc*—ORGANIZATION OF STUDIO SOUND DEPARTMENTS*, *by* Carl Dreher *Sound Director, R-K-O Studios*—PRACTICAL PROBLEMS IN RECORDING*, *by* A W. De Sarte *Sound Director, Paramount-Famous-Lasky West Coast Studios*— PRACTICAL PROBLEMS IN RECORDING*, *by* Douglas Shearer, *Recording Engineer in Charge of Sound Department, Metro-Goldwyn-Mayer Studios*—PRACTICAL PROBLEMS IN RECORDING*, *by* L E Clark, *Technical Director of Sound, Pathe Studios*

*Now in process of publication

Academy of Motion Picture Arts and Sciences, Hollywood, California.

Please send me the first eleven papers in the ACADEMY TECHNICAL DIGEST, a binder in which to keep them for convenient reference, and mail the seven subsequent papers to the address below. My check or money order for $4 is enclosed.

Name _____ **Address** _____

WHAT DO YOU PHOTOGRAPH?

Are You a "Snapshooter" or Do You Make Pictures?

By HAL HALL

ONE OF the most natural impulses all men have is to run wild when they suddenly secure a new toy They are very much like children in that respect Give a youngster a new sled and he will ride it twenty four hours a day, if not stopped Give a youngster a set of crayons and he will have chalk all over the house for a few days Then the chalk is put away and is forgotten

So with men who buy their first 16mm camera It is a plaything they have been wanting At last they are in a position to throw something on the screen and watch it actually move! And they rush about shooting this and that with reckless and utter abandon as it were There is no rhyme or reason behind the shooting except the desire to just "shoot pictures". This is wonderful and is an outlet for a lot of pent-up desires It is good for these men who may for years have wanted to make pictures

But—what of the time when the first blush of novelty has worn off? A man may be excused for shooting anything at any angle when he first gets his camera However after the first month don't you think it is time that the amateur movie maker take stock of himself and start to attempt to make "pictures"?

One of the most boresome evenings I have known was spent the other night at the home of a friend who has a 16mm camera He had shot hundreds and hundreds of feet of film and wanted me to look at all of it Of course I looked Who wouldn't? But it was a terrible evening, all because this man had never given a thought to anything more than aiming his camera at something and just "shooting"

No thought had been given to composition and pictorial beauty His stuff reminded me of the little snapshots taken in the mountains by vacationists who lean out of the side of their car, shoot at a magnificent beauty spot and then on returning to town, send the roll to the corner drug store with the order "Give me three each of these

Not everyone can become a master of composition But every owner of a camera can at least make an effort to secure pictorial beauty in his shots. A picture has a two-fold aim it aims to represent an object or objects and also to be a decorative design The lines and masses of the picture must have a certain balance or rhythm in order to please The photographer cannot always shift his objects about but must find his design in nature He has to move his camera not the objects he is photographing The man who does not do this will most of the time have just "pictures" but will fail to bring beauty to his screen And after all how many of us want pictures that are not beautiful? Not after the novelty of using our camera has worn off

And so, I stress the matter of composition Composition is defined best by the man who declared that perfect composition consists of making a picture that is pleasing to the eye

When one looks over a particular bit of landscape it often appears beautiful Take a camera set it up and shoot and the result is a disappointment This because the space covered by the picture is cramped So the photographer must take time and use judgment in making his photograph In other words he must think of composition And excellent composition should be one thing that the Amateur should give us for he unlike the professional cameraman shooting on a big production is not hampered by the matter of time

In making a motion picture there is always a schedule to follow The picture has to be made in a certain number of days So the cinematographer is limited as to time He must be skilled in his work and know composition or his work will suffer Many times the overhead on a picture runs several hundred dollars a minute Naturally, the cameraman will not have much time to waste in studying where he can get the best effect

But the Amateur is not cramped by this matter of time or expense He has all the time necessary, so he should give us a good picture from the point of composition All he needs to do is stop and study the situation and think pictorially

First, the picture must not look cramped The general design should be simple and it should resolve itself into a few simple forms or groups of forms rather than into a mixture of light and dark patches and bewildering lines

The picture-maker should at the start know what he is going to make In other words he should have an object in view If he hasn't then do not set up the camera just for the sake of shooting something. Generally speaking, a good rule is to have the main object of your picture pretty well centered If this is done with the lesser objects acting as balance the effect will be pleasing

So many amateurs forget to frame their pictures They just set up the camera and aim at an object maybe too far away and snap They forget foreground frame and beauty The result is that when they see it on the screen they are disappointed, for they have little or nothing You see a beauty spot in the mountains You shoot it with thought and you have a scene you will appreciate for years To do this you must give thought to the job Pick a spot from which, through the camera you can get the best appearing picture Try to have your picture framed properly with something in the foreground that will take away the bareness you see in so many pictures Foregrounds should be noticeable but not obtrusive They should contain contrasts, but not too great contrasts and not too detailed A strongly lighted rock or tree trunk on one side or the other of the immediate foreground is admirable

However the foreground should not form an isolated patch but should lead into and blend with the picture Sometimes we see in a picture a foreground that could very well be cut away or trimmed from the picture without detracting from its beauty This is poor work and detracts from the picture The same applies to the top and sides of your picture

Another important element often overlooked by the Amateur is the matter of line The line may be a ridge of hills a flock of sheep going down the road a path or a bank of clouds, whatever it is it is important A soft undulating line is the most pleasing Nature cannot be changed to suit the photographer of course, so many times the line is not what we want Here the photographer many times can improve his picture by moving his camera Take the case of a path pointing toward the base of a tree Looking directly down the path we see it widen toward the camera. Move the camera to one side and the line curves past the tree and across the picture and you have a marked change that adds beauty

Another element which enters is that of light Too few give light much thought although it plays one of the most important parts in the making of good pictures Lights and shadows in pictures are generally found massed together, the darker tones at the base and one side, the lighter tones at the other side and top Where a strong dark juts out against a high light we obtain a contrast which generally forms the central point of the composition Therefore it should be well placed Generally speaking the best rule to follow is to go on the pyramid principle of dark masses at the base with the smaller and lighter masses above

Then there is the matter of focusing and exposure An exposure meter such as the Cinophot or Dremophot will keep you right in the matter of exposure and focusing comes with practice. The principal requisite is the desire to make better pictures then work to that end by experiment

PRO-FESSIONAL AMATEURS

Dan B. Clark A. S. C., Uses His Cine-Kodak To Instruct His Assistants in the Art of Cinematography

By WILLIAM STULL, A. S. C.

ALMOST everyone in pictures knows Dan B Clark A S C, but only a few of them know that he is one of the industry's most ardent advocates of personal movie-making On the other hand, they do know him as one of the outstanding members of the camera profession both as a cinematographer and as a man For Dan is one of those rare beings, a practical idealist: a man who has both the imagination to conceive lofty dreams, and the ability and courage to make them facts Therefore even if he were not the skilled cinematographic artist that he is, he could not fail to be one of the film colony's most respected citizens

One of Dan Clark's most pronounced ideals is his conception of the cinematographic calling as a profession of service, not only to this generation but to those to come To him the motion picture is not only entertainment, but a builder of ideals for this generation and the next and a record of contemporary life and thought for our descendants For, after all, it is the only living record that we can pass on to those who come after us Therefore his every effort is constantly bent to write into that record as much of what is permanently uplifting as lies within his power to do And to a man of Clark's determined mould that power is great indeed

Probably the outstanding example of this is the influence he wielded during his seven years as Chief Cinematographer for that idol of American Boyhood Tom Mix Educators everywhere have commented extensively upon the wholesome character of the Mix films—how he never, in all the years when he was the hero of so many young minds allowed any trace of anything likely to be an even mildly undesirable influence upon them, to enter his films Few people indeed know that this principle was the result of a cameraman's idealism But it was Dan Clark who first convinced Mix of the advisability of such a course and then battled shoulder to shoulder beside him against directors writers and executives who imagined it would be good box office' to violate the unwritten code And in a great measure as a result of that code though the violators galloped on to momentary success Tom Mix steadily climbed to the undisputed kingship of Western films—and held it until he chose to retire In all that time, thanks to Dan Clark's practical idealism nowhere in the hundreds of Mix pictures did anyone see a single shot of Tom Mix either drinking or smoking If the script called for action at the bar of a saloon, the action was there—but first it was carefully 'planted' that Tom didn't care for likker Whatever might be their personal tastes off the set, neither Tom nor Dan would be a party to setting a bad example to the millions of youngsters throughout the world whose lives would be better for the thought that if Tom Mix doesn't drink, I don t need to either '

Since Mix s retirement from the screen Dan Clark has been assigned to the photography of many pictures other than Westerns' but still he has adhered to his code, regardless of what his associates might think he has resolutely refused to photograph scenes that were unduly suggestive or that failed, in his estimation to give his audiences, present and future something truly wholesome and worth remembering He feels that being a cinematographer he is an artist and that art isn't an insinuation of polished indecencies but an inspiration to the highest and finest emotions

With such professional and artistic ideals it is only natural that he should look upon his Cine-Kodak as a means of aiding and inspiring others quite as much as a source of personal recreation

One of the projects closest to his heart has always been the education of his junior associates along these same lines He has felt that one of the greatest responsibilities of the Chief Cinematographer was the professional guidance of his assistants Accordingly, many years ago he organized the Assistant Cameramen's Club, which gave the assistants a place and an opportunity to gather together to discuss their professional and artistic problems, and where they could hear informal, educational talks by the leading cinematographers of the industry Later,

as President of the American Society of Cinematographers, this educational policy was expanded to benefit the entire industry when he instituted the now famous Mazda Light tests—the most colossal scientific and educational step ever undertaken by any single organization for the betterment of the entire trade

Similarly, in his own work he has always made it a point to educate his assistants, so that if they had it in them, they could become expert photographic artists under the careful guidance of someone who was personally interested in their welfare and advancement

Naturally, when the Cine-Kodak appeared on the scene, he hailed it with joy, for it made the task of teaching his assistants immeasurably easier

"You see" he says "I've almost a regular course of study through which I put my assistants Whenever I get a new assistant after I've sized him up, I gradually let him do more and more important parts of the camerawork,—more than just carrying the boxes around First I teach him to set up my camera and tripod where I want them Then I teach him to load the magazines and thread the camera up When all that becomes nearly mechanical to him I teach him how to focus the lenses, and have him actually do it, after I've made certain that he understands the importance of accuracy in this, and can do it properly I let him do it all the time. All this time I've been teaching him too the principles of photography—the basic chemistry and so on underlying it all Then I begin to teach him about composition and in the same manner I soon have him setting the camera in place for the shot, composing the scene etc, while I'm lighting the set By the time he's gotten proficient in this, I start to teach him how to light each shot just as I would and slowly give him more and more responsibility in it, until finally I can trust him to go onto a set before I do and get all the lighting set up letter perfect The only trouble is that by that time he is ready to graduate to a second cameraman's job, and I've got to start training a new assistant

Amateur photography is a wonderful help in this training The best way to teach photography—or anything else—is by setting the student definite problems to solve Amateur camera work enables me to do this without great expense or interference with the company's business After I've given my assistant a pretty good theoretical knowledge of photography I give him my *Leica* still-film camera and set him actual practical photographic problems to solve First I tell him definitely what to shoot and try to make him work out as much of the 'how' of it himself as he can Then when I'm sure he knows pretty well what to do and how to do it I turn him loose with the general instructions that I want such and such a kind of pictures made, and rely on him to bring them back to me All of this time too the boy has to do his own developing and printing, mixing up his own solutions and all that And once I'm sure that he knows how to do things I don't accept any alibis He's *got* to deliver the goods —just as though he were a professional still man! By the time he can do this I teach him how to enlarge the little negatives the *Leica* makes. I've an enlarging outfit for it and I turn it over to him and make him turn me out both straight and pictorial enlargements from his pictures I try, all through this period to impress upon him that photography demands brain-work that one or two well thought out prints are preferable to a hundred inferior snapshots

Dan Clark, A. S. C., and his Cine-Kodak

By this time the average assistant if he really has the makings of a cinematographer in him is ready to graduate to a second-camera position When he does this, of course, he begins to think pretty well of himself But there are lots of second cameramen in the business and if he is to get on I must teach him to use his brains instead of his brag This is the point where I start him out with the Cine-Kodak He should by this time be a passably good amateur photographer, so I let the Cine-Kodak make a real cinematographer out of him I teach him how to use and care for it just as I did with the *Leica*, and in the same way, I start him shooting little scenes with it under my direct supervision By the time he has really mastered the instrument—and those little cameras have possibilities that most amateurs don't dream of—he's gained a real understanding of the principles of cinematography Then again I turn him loose and give him definite assignments to bring in on his own I make him understand that he must bring me in a complete film of whatever subject I assign but that he must do it without any interference with his other duties He usually does it!

On one of the last pictures I was on I gave my assistant Arthur Arling the Cine-Kodak, and told him to make me a complete story of the location trip we took to the Rainbow Bridge country of Arizona He had wonderful possibilities to work with there for the country is surpassingly beautiful, and photographically virgin, for less than 1100 people have ever been there And the boy did himself proud on the 16 mm assignment bringing me back a little 400 ft picture that was a gem Part of it was in Kodacolor—remarkably beautiful stuff it was too—and the rest of it, though in black-and-white was done on Panchromatic film, and was as well photographed as though it were a part of a professional feature He had reported the whole trip very effectively, showing the various members of the party, including George O'Brien and Sue Carol, the stars, in a number of informal moments along the trail (we had to travel on horseback for several days to get there), in camp, and so on winding up with some highly pictorial scenes of the desert country, and the wonderful Rainbow Bridge

"When we got back to Hollywood I showed him how to edit and title the picture and the result was as excellent a little travel reel as any man ever shot That little 16 mm film, *How We Made The Lone Star Ranger* served more or less as a diploma for Arthur, for not only was it the first picture he had ever photographed but it marked his graduation from an assistancy to a second cameraman's position

"We two have just gotten back from another long location trip this time up into the snow country of Northern California and Oregon, for *The Girl Who Wasn't Wanted* Arthur used the Cine-Kodak on this trip, too, and he is now cutting and titling the results He's let me see some of the 'rushes', and they show that he's justified his training From the desert to the deep snows is some change in the matter of photographic conditions—but he's been well enough grounded in the principles of cinematography so that he was able to make the change successfully Naturally with such evidence of the success of my methods before me I can't help being enthusiastic over the ability of the Cine-Kodak as an instructor in cinematography, I know that it's a first class photographic instrument and it enables the boys to learn more about practical screen art than anything else could possibly do Besides it develops photographic self-reliance and resource as no study ever could!

"Incidentally I often learn a good deal myself that I find useful professionally, with the little Cine Kodak"

More than a few of Dan Clark's former assistants who have been subjected to this practical course of study have since graduated to First Camera positions while among the ones who continued in photographic work and rose to professional heights are Norman deVol A S C, Dan's first assistant who when Tom Mix left the Fox Company followed him to F B O and served as Chief Cinematographer on the Mix pictures there and C Curtis Fetters A S C who has developed into one of the best still photographers on the Fox staff A number of Clark's other ex-assistants are now following in their footsteps the latest being Arthur Arling who as mentioned before has just started in at second camera, and is, true to form making good They are probably Dan Clark's greatest contribution to the profession which he loves men whom he has imbued with the ideals he holds for the craft they have embraced and to whom he has imparted the technical and artistic ability that is carrying them on their way to become the master cinematographers of tomorrow

Germany

THE D L S (German Exhibitors' Producing Syndicate) is arrange a comprehensive production schedule of sound pictures The D L S is closely allied with the Tobis Syndicate, which has advanced the former capital and is now subscribing half a million mark's worth of D L S shares in which sum the capital already lent is to be included

At Last It Is Possible!

For many years Directors and Camera Men have desired special effects in their films after the sets have been shot and dismantled, or it is too late or too expensive to make a retake. Such effects as making a long shot into a close-up, putting in lap dissolves and fades, making a miniature of a scene and double exposing it over another scene, and other special effects.

To meet this situation, the Burton Holmes Laboratory has installed one of the new DEPUE 35 mm. Optical Printers which will do all of the above stunts and many more.

Keeping abreast or ahead of the times has always been the policy of this organization.

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New Ampro Projector

(Continued from Page 31)

its tricks in the dark without having to fumble around for the various gadgets and buttons

The Ampro rewind is of particular interest It requires no switching of reels or belts The projected film is threaded into the upper reel and the machine run in reverse A clutch button is depressed and 400 feet of film go from one reel to the other in less time than it takes to tell about it

The personnel back of the Ampro Precision Projector is of equal interest The organization building Ampro has engaged in manufacturing Precision products for more than twenty years and for more than five years has specialized in making motion picture projectors and apparatus which has been marketed under several well known trade names

The Ampro sales policy is being directed by Julius Keller Jr well known as a sales director with an enviable reputation for helping dealers make money and as one who believes whole heartedly in reciprocating public patronage with factory service of the highest order

We predict a bright and happy future for the Ampro Precision Projector

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Watch for the Cinematographic Annual

"Colorama"

(Continued from Page 15)

and sixty feet long placed symmetrically on twenty-foot centers The troughs are made of No 20 gauge galvanized iron in sections of about twenty feet each in length. The troughs have saw-tooth openings along the sides through which colored lights and shadows are projected onto the ceiling. In the bottom of the troughs are roundels through which may be projected red, blue green and white light

With this system of lighting the lighting engineers expect they will revolutionize lighting and perhaps interior decorating

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Watch for the Cinematographic Annual

Value of Photographic Training

(Continued from Page 7)

tical knowledge he has gained by years of working with various directors

However the cinematographers go on year in and year out doing an important job well and receiving but scant credit for what they do It does seem to this writer that studios' executives are missing one of their best bets when they overlook the men behind the cameras and go far afield to seek directorial talent

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Watch for the Cinematographic Annual

All Quiet on the Western Front

(Continued from Page 11)

seconds and there would have been real death

So realistic were the battle scenes that great care was taken in the hiring of the men for the jobs of soldiers No man was taken who had been shell-shocked in the World War One got by He was taken to a hospital the first day The screaming shells were too much for him

As remarkable as the uncanny work of the dynamite man was the work of the cameramen who were getting the spectacular and the closeup Closeups of poor devils, who with faces as pale as turnips clenched hands and whimpered softly for the mothers who cuddled them as babies You cannot describe it adequately You have to see it

This picture should be a masterpiece And its realism is so great its story so powerful the suffering of the youth of the world so graphically portrayed and photographed that if enough mothers see it they may exert a force that will prevent such future scenes in real life as this picture shows From the point of view of story direction and cinematography Universal has a picture that should go down as one of the greatest war pictures ever filmed

Micro-Cinematographic Apparatus

A New Device for Photographing Through The Microscope With a 16 mm. Camera

By HEINZ ROSENBERGER
of the Rockefeller Institute for Medical Research

MANY an amateur who owns a 16 mm motion picture camera would like to extend its possibilities in photographing objects which others have not as yet taken. For those who can afford to travel this is not difficult and it gives one a great deal of satisfaction to bring home and demonstrate to friends scenes of strange people, beautiful scenery and many wonders of nature.

But it is not at all necessary to venture out and travel in order to take scenes of interest and beauty. There is an immense field almost unexplored by amateurs and scientists as well that is the world behind the microscope. Those who have never looked into one have certainly missed a really worth while experience. Every drop of stagnant water from a little pond or river is the center of many happenings. Thousands of tiny creatures, the largest smaller than a needle head, perform their dances or eat smaller creatures. Their activity is exciting as one can follow them and observe what they will do now and later. But what is most fascinating is the fact that they are all clear as if made from glass. One can see right through and observe the little organs inside better than with an X ray machine.

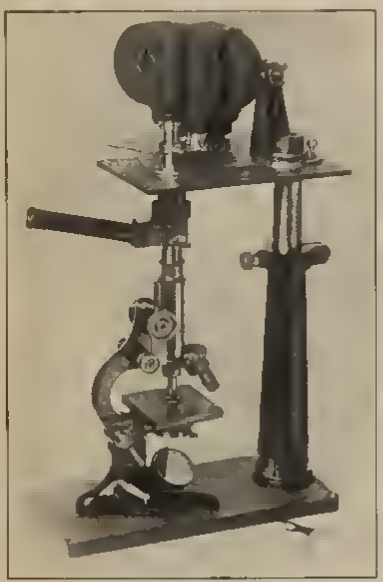

Figure 1

In some of them a little heart may be seen beating rapidly or a little stomach always active digesting food which very frequently is composed of still smaller animals. Others have a little stirring apparatus resembling the wheels of a watch (for instance rotifiers) which seem to rotate rapidly in order to bring the food closer to their mouth.

One can observe the stream of life everywhere and even in plants by following the protoplasm circling in the cells. It is even possible to see the formation and growth of crystals, and by using polarized light one obtains colors of a combination and brilliancy never seen before, a good subject for color photography.

It may be mentioned that microscopic motion pictures are used quite extensively in the scientific laboratories and universities. The advantages are quite obvious if one considers the time and work which would be necessary to demonstrate to an audience a phenomena which takes place under a microscope. It would be impossible to show it simultaneously to a number of people. But how easy it is to run a motion picture projector and at the same time explaining the phenomena appearing on the screen.

But the micro film is not only used for demonstration, it is an aid to scientific research. The motion picture made it possible through its domination of time to lengthen or accelerate time. Time acceleration especially is very useful in microscopic investigations where certain objects, for instance growing and dividing cells, move so slowly that the human eye cannot perceive them. By taking single exposures at time intervals for instance 1, 2 or 3 per minute, and by showing them through the projector at normal speed, 16 per second, the motion of these cells are translated into understandable speeds.

These are just a few possibilities for microscopic motion pictures, but the fact is that the field of adventure is in this world of wonders is unlimited.

In order to give the owner of a 16 mm camera the opportunity to take motion pictures through the microscope, the author has designed a little apparatus (Fig. 1), which is the result of many years of experience in this field *

The microscope (any make) is placed on the base plate and brought in line with the center of the opening of the camera holder, which is screwed without the lens on the swivel plate, to the left so that the focusing lens is in line with the microscope. After the object is sharp in focus and the beam of light adjusted properly by looking into the ground glass, the camera is swung back in position and the picture can now be taken. By using a so-called beam splitter the object can be observed while the picture is being taken. All this is made so easy with this outfit that anyone can take microscopic motion pictures without difficulty. Any make of camera can be used with this apparatus, be it hand or motor driven.

*It is a simplified model of the large Standard Micro Cinematographic Apparatus described in Science of June 28, 1929, Vol. LXIX, Nr. 1800, and in the Transactions of the Society of Motion Picture Engineers, Vol. XIII, Nr. 38, 1929, pp. 461-464.

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Little Sunny Twin

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The above picture made on 16MM film with 1/32 second exposure at f 3.5 shows what one Little Sunny Twin will do. The lamp was 10 feet back from the subject and no other illumination was available.

Little Sunny Twin is the only lamp at its price that delivers a full 90° angle of evenly intense light sufficiently fast for F 3.5 movies. Operates on 110 volt A. C. or D. C. Semi automatic. Draws only 15 amps. Try it 10 days. Money back instantly if you are not satisfied. Order now and get valuable book of instructions on Interior Movie Lighting free of charge.

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Name *Address*

City *State*

Your Makeup Problems

By MAX FACTOR
[Internationally Known Authority on Makeup]

Dear Mr Factor:
I have seen many requests in your column for information about bronze or metal colorings for the body, but how about alabaster, or white? If one wished to look like a marble statue, what would you recommend? Please give detail about eyes, etc and also tell me what to do with my hair, which is ash-blonde RITA

Answer:
We manufacture a Special Stage Whitener which would be very suitable for your purpose To get a true statue effect the eyelids would have to be covered with the Whitener This Whitener is harmless, and washes off with soap and water As your hair is rather light to start with it could be effectively whitened with White Masque Get the Professional Cake It also is removable by shampooing

Dear Mr Factor
For evening wear what kind of skin whitener do you recommend? I want something for my arms shoulders neck etc that will not rub off on a gentleman's dark suit while dancing etc Also will you please tell me whether or not a high polish on the nails is in good taste now or not?
T E V

Answer:
Our Liquid Whitener which comes in Flesh and Rachelle as well as white, gives a beautiful translucent appearance to the skin and is extremely effective for evening wear It will not rub off on clothing, as powder does A very high polish on the nails is generally not considered to be in such good taste as a medium polish

Dear Mr Factor.
Does a man, doing an acrobatic act, wear make-up of any kind, and if so, what kind? I am five feet eight inches tall, dark hair hazel eyes and what you would call "Stockily built" I am training for the stage and want to know just what is necessary before I try to show my act DON.

Answer:
All people appearing on the stage should wear make-up Your make-up is 7A Grease Paint 7R Face Powder, No 3 Lining Color, No 3 Moist Rouge No 4 Under Rouge Black Dermatograph Pencil, Raspberry Dry Rouge

Dear Mr Factor.
Do you consider it advisable to always use a cold cream base before applying street make-up? And do you think that a dry rouge or a paste rouge is best for the skin? I notice that you frequently recommend dry rouge but do not know whether that is just for the stage Can your products be obtained at any drug store? L T.

Answer:
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Of Interest To Amateurs

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Exposure

THAT little matter of exposure is still a bug bear. So why risk spoiling a good picture by guessing. The Cinophot and Dremophot assure you of correct exposure, so why not be on the safe side—use one and save your pictures.

Amateur a Hero

A MOTION picture camera in the hands of a cool headed Spanish amateur movie maker averted possible loss of life when the German steamer Monte Cervantes went down off the Tierra del Fuego coast. As the panicky passengers rushed for the boats, the man set up his camera and began to film the scene. This action calmed the passengers, permitting the filling of the boats to proceed orderly.

Dental Profession Uses Motion Pictures

THE recent 66th Meeting and Clinic of the Chicago Dental Society serves to throw interesting light on the increasing extent to which motion pictures are being used in the dental profession.

Whereas only a year ago the dental movie was championed by a mere handful of pioneers, this year at the Chicago meeting no less than ten reports were illustrated with 16 mm. motion pictures, while in another part of the convention building a special room was devoted exclusively to a three-day projection program of thirteen different dental and general health films. Some of the Chicago leaders are already contemplating an arrangement for the next convention whereby any practitioner having a film of his own will be able to show it in a special movie room provided for this purpose.

An outstanding film shown at the meeting of Dr. Hugh W. MacMillan of Cincinnati on "Physiology of Mastication" was of particular interest due to the fact that he made every bit of it himself with his own Filmo equipment—his own titles and animation and photography—truly an example and inspiration to those of his colleagues now embarking on this type of work.

Dr. Donald E. Smith presented an illuminating film "Pontic and Fixed Bridge Work" made in the University of Southern California, and Dr. W. W. Masson of the University of Denver showed a painstaking work which should rank among the highest examples of professional films. These are just a few of the films displayed.

The motion picture film can make an important contribution to the dental profession. Any question of technique can be presented clearly, comprehensively and dispassionately. The easily operated amateur movie camera serves as an admirable means of making permanent records of interesting cases.

Great Britain

A SCHEME to use multilingual talking films to assist British industrial groups and commercial firms to sell their goods abroad was announced by British Publicity Talking Films, a subsidiary company of Associated Sound Film Industries, Limited, the one million pound producing combine connected with Kuchenmeister. Facilities will be put at the disposal of the leading British industries and commercial firms to enable them to make sound films which can either form part of the regular equipment of both their sales representatives and their expert technicians or can be used for demonstration purposes in shops and at exhibitions and trade fairs. Similar facilities are also offered to business firms for the making of talking films in English only for exhibition in this and other English-speaking countries. (British trade press)

A Practical 'Gadget'

WITHIN the past two or three years as cameras have grown heavier and heavier, and been encased in all manner of booths bungalows etc , for sound photography, the problem of properly supporting them on their tripods has become increasingly acute This is particularly true in cases where the tripod has to be held down with turnbuckles, and when baby' tripods are used The small thumbscrews that were formerly adequate to prevent the tripod-legs from telescoping upon themselves are now entirely unequal to the strain. It is impossible to tighten a small thumbscrew to a point where it is absolutely certain to withstand the weight of the new, heavy 'blimp' cameras, and the added pull of the turnbuckles.

Therefore, in my recent work I have found this a very practical method of ensuring the stability of a camera set-up I have the legs of my tripods drilled with small holes at the various heights most frequently used, and after setting up, I slip small iron spikes into these holes, as shown in the illustration By attaching the spikes to the tripod with leather thongs I can be assured of having them always handy, and by their use, I can be certain that my tripods will not slip in the middle of a scene

—Karl Struss, A. S. C.

France

CONFERENCES between Messrs Delac and Ch Mere on the question of authors rights are practically finished M. Delac acted on behalf of the French Chambre Syndicale, and M. Mere on behalf of the Authors Society As already reported the authors demand a percentage on theatre receipts M Delac was not able to agree to this In all likelihood a new authors society for French cinema industry alone will be created as a result with M Delac as instigator Apropos a merger has been achieved between the "Societe des Auteurs et Compositeurs Dramatiques" and the ' Societe des Auteurs de Films" As a result of this alliance, the former group is demanding a percentage on theatre takings Incidentally Charles Burguet late president of the latter society has been appointed general agent of the films department of the S A C D.

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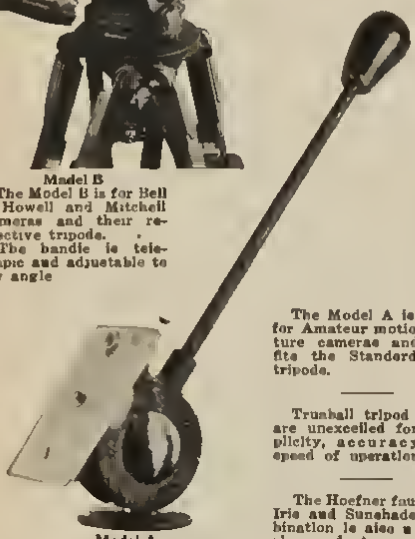

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Eastman in Tennessee

THE first production unit in the Tennessee Eastman Corporation's new cellulose acetate plant at Kingsport Tenn., has just been put into operation, according to an announcement by the Eastman Kodak Company's subsidiary concern. Full-scale production will be reached by mid summer.

Construction of the cellulose acetate plant began late in June. The manufacture of cellulose acetate which is the basic ingredient of safety film for home motion pictures and for safety x-ray film at present is carried on by the Eastman Kodak Company at Kodak Park its largest plant in Rochester N. Y., using acetic acid and acetic anhydride produced by the Tennessee Eastman Corporation. Shift of the manufacture of cellulose acetate to Kingsport is expected to effect economies because the necessary cotton, as well as the chemicals mentioned is a product of the South.

The new cellulose acetate plant consists of a cotton preparation building, a cellulose acetate building, and an acid recovery plant. A new power plant which went under construction simultaneously with the cellulose acetate plant is already in operation. It will supply steam not only to the new buildings but also to the previously existing plant of the Tennessee Eastman Corporation, which manufactures acetic acid and acetic anhydride in addition to methanol and other wood distillation products. A very complete water purification and filtration plant has also just been put into commission.

Tanar Recording Corporation, Ltd.

OFFICIAL announcement has just been made of the organizing of the Tanar Recording Corporation, Ltd. This corporation will handle the making of the recording equipment formerly made by the Reeltone Corporation having acquired license to use the Tanar lamp according to Len H. Roos inventor.

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An Adventure Story

Lived by Two Intrepid French Cinematographers

THERE lives on one of the southern islands of the New Hebrides archipelago a nation of kanakas divided into two tribes the Small-Nambas and the Big-Nambas (big belts and little belts) which has preserved a very curious custom that of eating men. Medical men affirm entirely without desire to create adherents to such a theory, that the best nourishment for the human animal is his own kind. This may be true for the Small Nambas and the Big-Nambas—so called because they wear for their sole costume a small or a large bark belt—are superbly built.

Two Frenchmen Andre Paul Antoine and Robert Lugeon were sent two years ago by a great Parisian newspaper to live among these cannibals for the purpose of making an educational film which should show us their lives and customs.

We have been able to interview Robert Lugeon the cinematographer of *At Home With The Cannibals*, who has been back in France several months and who is again preparing to journey far from his homeland in pursuit of his cinematic reporting.

Andre Paul Antoine and myself" he told us, set out from Marseilles at the end of September 1927, on the *City of Strassbourg*. We carried three cameras a small generator and lamps and so on. We travelled by way of Suez Aden Colombo Adelaide Melbourne and Sydney.

'A small French boat the *Dupleix*, then took us to Noumea in New Caledonia and then to Fort Vila in the New Hebrides. Then we bought a tiny coaster named the *Nakato* which means 'cocoanut-eating crab.'

"A board this craft we had prowled for some time about the cannibal's island when on February 8 1928 a typhoon cast us ashore on the coast of the little country. Very luckily none of the cameras had suffered any damage during the storm so I could shoot.

The coast upon which we had raised our tents had been three years before the scene of a most unfortunate occurrence. an English planter named Bridges and his two children had been eaten by the natives. For several days we searched in vain for the inhabitants of the island in this pursuit we traversed a good deal of the country and several deserted villages. But where were the Small-Nambas and the Big-Nambas? Ignorant as they were of our intentions they had watched us and fled before our approach. It wasn't hard for them to hide themselves from our gaze for the underbrush on the island is so thick that one can't see a man standing three yards away.

'One morning, a band of about fifteen kanakas tomahawk in hand, showed themselves to us. Led by one Meltetali a chief of the tribe they advanced toward our tents. Andre-Paul Antoine walked toward them rifle in hand. I was behind him my camera trained on the natives.

"Meltetali signed Andre-Paul Antoine to stop and placed his tomahawk on the ground. This indicated that he did not want to attack us. Andre Paul pointed his gun into the air and a long palaver in 'bichelemar —the lingua-franca of the islands—ensued between the native chief and him. The natives touched the canvas of our tents curiously and appeared amazed by the cold light cast by our electric lamps. But, after a moment their astonishment would cease— It's an invention of the White Men they would say.

The palaver ended. Meltetali agreed to take us into his tribe and promised us that we would have nothing to fear as long as we dwelt with him. He kept his word those savages have a remarkable sense of honor. They have also many other fine qualities and particularly they are none of them thieves.

'A simple anecdote will prove this. One day, during the six months visit we made with these cannibals I placed purposely a piece of money on a bench then I hid in the brush and watched. A kanaka passed by saw the piece of money picked it up and put it on a branch of a tree which he blazed this was so that the owner of the coin might retrieve it."

"You recovered the coin after the kanaka left?' we asked M. Lugeon.

'No it is still there'

"The organization of life among these cannibals is very curious" continued the cameraman. It is the women who do the greater part of the labor necessary to the life of the tribe. The men, they live in a community lodge occupying themselves with fishing and, especially with making war.

'The end of our sojourn among the kanakas was hastened by a feud between the two tribes. That of Meltetali was about to burn a village of the enemy and to make two prisoners·

these were to be eaten Our presence was judged undesirable by certain members of Meltetali's tribe the Bete Huls clan exceedingly drunk Meltetali advised us to depart very quickly from the village and even from the island our hut was already in flames!

The kanaka chief carried his loyalty as far as personally accompanying us from the village to the coast and offering us an outrigger canoe We rather sadly took leave of him Andre-Paul Antoine and I had made many real friends among these savages'

—Louis Saurel in *Cinemonde*, Paris

A New Service for Amateurs

A LONG-FELT want of the amateur cinematographer bids fair to be met by the Hollywood Camera Shop which is moving into new quarters at 1442 North Highland Ave

At the head of the firm is Mr W F Sullivan a professional cinematographer whose long connection with both the Eastman Kodak Stores and the Bell & Howell Camera Company has given him an unusual knowledge and understanding of both professional methods and the needs and problems of the amateur Mr Sullivan was one of the cinematographers selected to make the first practical tests on the original models of the Eastman Cine-Kodak, and his contact with 16 mm cinematography has never since been entirely broken

Mr Sullivan's long experience with the great sales and manufacturing organizations catering to the amateur cinema trade has impressed upon him the great need for a more personal *after-sales service* than is possible where the business is conducted upon quantity production and sales bases Accordingly, he has established himself in these new quarters in Hollywood for the express purpose of making available to all users of amateur cinema equipment the interested personal advice of an expert cinematographer upon all questions relating to cinematic activity

"Most purchasers of 16 mm equipment," says Mr Sullivan, "are forced by the tremendous proportions to which the amateur cinematographic trade has grown, to forgo the intimate personal instruction in the essentials of movie-making which they so vitally need They find themselves, instead with the most intricate mechanical devices they have probably ever been called upon to operate in their hands—without adequate practical instruction as to how to operate The intentions of the manufacturers and merchandisers are of the best, but they are overwhelmed by the immense volume of their business

"The amateur however undaunted does his best to explore the new worlds opening before him unaided He manages to get his camera loaded, and thanks to the excellent design of camera and film, it is a twenty-to-one shot that he will get a passable picture But after he has seen what his more experienced brethren are doing he is unsatisfied with a merely passable' picture—yet he has no place to go to seek the personal service and instruction that will enable him to get better pictures

"This is the service that the Hollywood Camera Shop is in the business to give him Not to take his money—but to give him the benefit of the best knowledge that a professional cinematographer has at his disposal Especially we are equipped to give practical demonstrations of the use and advantages of amateur interior lighting equipment for we have a miniature studio at our establishment, and we invite all amateur cinematographers interested in learning about interior lighting to come and make use of our equipment and experience"

The value of such a service as this cannot be exaggerated It is a great boon to the amateur cinematic movement, and as such *The American Cinematographer* wishes Mr. Sullivan and his firm all success

Berlin

THE Berlin Police Department is to make a practice in future, of publishing a register of dubious foreign firms so as to warn German film exhibitors against entering into business dealings likely to be unsatisfactory The practice has been started at the instigation of various Berlin firms who have had unhappy experience in dealing with Balkan houses who cannot be sued in the last event, owing to unsatisfactory legal arrangements It is expected that other companies trading internationally—English French and American—will make use of this list

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Civic Repertory Theatre

A group of drama lovers has organized the Civic Repertory Theatre in Hollywood and plan to make this take rank in the artistic life of Hollywood and Los Angeles alongside The Hollywood Bowl, The Philharmonic Orchestra The Pilgrimage Play and similar activities

Sponsors of the Civic Repertory Theatre do not consider themselves in the light of owners of the project They are its stewards who have assumed the responsibility for getting it under way for the benefit of the public-at-large Committees are being organized representative of various elements of the community to oversee extending the civic aspects of this undertaking It has many potentialities for serving the people, which will be developed as soon as a dependable audience has been organized

That is the most important thing to be done right now—to organize a clientele which can be depended on to support the plays that are given Most theatre-goers today are sharp shooters" They shop for their amusements wherefore they tend to be a bit fickle. Their confidence must be won. They must be convinced that to continue the Civic Repertory Theatre depends on each and every one of them Their interest must be won in the theatre over and above the immediate play.

All plays given by any group cannot hope to meet with equal approval from all the people But they should be willing to attend an occasional drama which they do not like so much One reads many stories to find a really good one and we listen to much music at symphony concerts which we are not particularly enthusiastic about Tolerance is needed in the aspiring theatre as in all upward looking phases of life

The Civic Repertory Theatre is not the enterprise of any one individual On the contrary it is the effort of a group of players and executives to foster the best in drama on a cooperative basis Operating expenses such as rent advertising, royalties production costs utilities stage workers, etc, are paid out of the first money If there is anything left thereafter it is divided among the cooperators up to the maximum of $100 a week each Any surplus thereafter goes into a sinking fund for emergencies future productions and extension work

To date the receipts have hardly met operating expenses wherefore the cooperators have been working for the good of the cause But they are glad to do so as long as it appears that the public is taking an interest Such a project as this is naturally slow in getting under way It represents something so entirely new that people do not respond to it as quickly as they might

Americans have been so immersed in business that it is hard for them to understand the artistic temperament which is willing to give of its best without an immediate return looking to the future for due compensation In this light the Civic Repertory Theatre is not a commercial project It is not operated to make money All it seeks to take in is enough to cover expenses and pay the cooperators a living wage And in that it is equally a non-profit activity

H Ellis Reed who has been a pioneer in many public spirited activities hereabouts notably Hollywood Bowl and The Pilgrimage Play", is chairman of the executive committee of the cooperators of the Civic Repertory Theatre Associated with him in the management are Paul Irving, John R Moss and H O Stechan The cooperating artists include Elise Bartlett, Boyd Irwin Mabel Gibson Olaf Hytten Marion Clayton Eric Snowdon and Kenneth Duncan They form the nucleus of the group of repertory players to be developed from which most casts will be made up From time to time however guest artists will be invited to participate

During the current season, eight productions will be made. The first one was And So To Bed' by James B Fagan which was generally acclaimed by reason of its fine flavor 'A Bill of Divorcement" Clemence Dane's powerful drama of modern marriage is the second offering now on Next comes "The Romantic Young Lady," by Martinez Sierra the foremost living dramatist of Spain It is a particularly happy selection for Southern California with its rich Spanish heritage Later in the season Ibsen's 'An Enemy of the People" and "The Mob' by John Galsworthy are to be given One original piece will also be done That leaves two as yet undecided but they will be announced in the near future —H H

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Silencing Devices Analyzed

(Continued from Page 13)

silent shots, of course, require no sound insulation The following table is a partial summary of the data collected It will indicate the wide variation in efficiency of silencing devices now being applied in cameras

Column 1 is a brief description of the nature of the silencing equipment

Column 2 shows how much louder or softer the noise of the camera enclosed in its protecting device than average whispering

The plus sign indicates that the noise as shown in the table is louder than normal whispering whereas the minus sign indicates that it is weaker than whispering The zero value indicates that it is the same value on the average as whispering

Column 5 Tripod
Standard wood (W)
Special (Z)

Table of Sound Insulation of Various Types of Camera Silencing Devices

1	*2*	*3*	*4*	*5*
Rigid Composition blimp set on table (Flexible cable inside blimp)	+ 8	19	—11	Z
Blanket hood and blankets over tripod	+11	12	— 1	W
Special capok blimp no blankets	+13	15	— 2	W
One piece cast aluminum bungalow	+15	19	— 4	Z
Rigid composition blimp	+15	15	0	Z
Papier mache blimp	+15	18	— 3	Z
Rigid composition blimp	+13	14	— 1	W
Rigid composition blimp	+20	12	+ 8	W
Rigid composition blimp	+ 6	10	— 4	W
Semi-rigid multilayer bag	+ 6	11	— 5	W
Heavy blanket thrown over camera (open at both front and back	+ 5	2	— 3	W
Old bag Light, blanket around tripod	+10	9	+ 1	W
New bag· Heavy, blanket around tripod	+10	10	0	W
Special bag Heavy	+10	14	— 4	W
Metal bungalow	+11	17	— 6	Z
Semi-rigid zipper blimp blankets arouud tripod	+ 9	11	— 2	Z
Rigid composition blimp	+20	15	+ 5	W

The data indicated that some of the studios, while having less effective sound insulating equipment, had taken greater pains in the maintenance and care of their cameras and drive mechanisms, so that the low volume of sound is due to the camera and drive making less noise to start with

Society Of Motion Picture Engineers To Meet In Washington, May 5-8

THE Society of Motion Picture Engineers will hold its Spring convention at the Wardman Park Hotel Washington D C May 5-8 according to the announcement of the Board of Governors

The various committees of the Society are already at work preparing a well rounded program of papers and entertainment for the convention, and it is expected that this convention will be the most constructive and valuable yet held by the Society

"While it is quite likely that details of sound picture production will receive a large share of treatment," reports J W Coffman chairman of Papers Committee the Society recognizes the fact that the industry is now well stabilized in sound picture production and that the sound picture is the standard picture today The sound technician is now regarded as an integral part of the industry rather than an outsider

Noted Educator Makes Sound Movie

A TALKING moving picture of President Frank Cody of the Department of Superintendence of the National Education Association was an interesting feature of the convention of that body held at Atlantic City February 22 27 The talkie was presented by the Project-O-Phone, the new portable equipment for the presentation of sound movies now being placed on the market by the Bell & Howell Company

The Cody sound movie was made in Detroit where Mr Cody is superintendent of schools, by the Wilding Picture Productions, Inc of that city. The Project O-Phone uses 16 mm film exclusively

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France

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